E-COMMERCE: EUROPE 2002

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ABSTRACT

Despite continued worldwide chaos brought about by challenged economies and global terrorist actions, e-commerce continues to grow in import for all regions of the world. B2B sales were approaching 1 US trillion worldwide by year-end. Worldwide holiday sales were expected to double from 2001, with Europe sales overtaking those in the US. B2C sales, while expanding, were challenged and may near 0.5 US trillion by year-end, the first decline in sales occurred in the third quarter. They were expected to be back on a slower track by year-end. This paper covers European e-commerce from early 2002 to present (November 15 – December 15, 2002).

INTRODUCTION

While the Internet began in 1969 as a US communications strategy in time of nuclear war and subsequent disruption of telecommunications networks, e-commerce began in earnest in 1995 after the introduction of a graphical user interface. Since 1995 world e-commerce sales have risen into the trillions. While geographic differences exist mostly due to the development status of various regions and the individual countries within a region, today approximately 15% of the world population is wired. While regional issues also exist in terms of privacy, credit, technology, and economy, e-commerce is here for the future. The recessionary economy of the last several years, exacerbated by terrorism and ongoing local hostile actions has not kept the increasing utilization of the Internet for on-line sales from slowing.

BACKGROUND

“In North America, while the number of users from students to seniors is increasing, the percentage sales increases have slowed. Sales figures continued on the increase with Canadian users doubling their holiday purchases. In South America, usage and sales are increasing rapidly, but several countries’ political difficulties are slowing usage. Broadband usage is increasing across the continent. In Europe, sales continue to increase at a significant rate. While in Eastern Europe, while percentage increases are high, the total number of users and concomitant sales remains low. In the Middle East, while user numbers are increasing, political turmoil, social unrest, and censorship are continuing challenges. In the Pacific Rim, numbers of both users and purchasers, because of both China and India, are increasing dramatically, while in the South Pacific Australia maintains its position as the most wired nation. African countries are beginning to evidence enhanced connectivity and increased on-line sales.
From a global perspective, advertising revenues over the Internet are on the decline and reflect the world decline on marketing spending. Technology usage, while suffering from the world slowdown in IT, will advance. Wi-Fi’s future, while not insured, has major implications for enhanced usage. China will arise as the world leader in high-end connectivity. Censorship is a continuing issue in various parts of the world. In China children under 16 are banned from Internet usage and in the US parental control of Internet access is a continuing topic of debate. Uses of on-line billing and payments have doubled worldwide. Dot-com closings have slowed and while firings continue, those have slowed as well. Some governments are discussing online voting. Privacy and security have become even more important issues due to terrorism. There has been a significant reduction of venture capital availability worldwide that has lead to a significant demise of new IPOs.

What does it all mean: in spite of terrorism; challenged economies; and continuing tax/fraud/secrecy/security issues, e-commerce sales have continued to rapidly grow. While a number of dot-coms have merged, been acquired, or closed, Europe seems to be less hard hit than the US by the dot-bombs. While venture capital availability has diminished, a healthy entrepreneurial climate exists in Europe, more so than in the US. Perhaps the US lead dot-com greed has enhanced European entrepreneurship at the marketing interface and diminished it in the US.” (Nemetz-Mills et al., 2002)

**THIS PAPER**

This paper represents the European portion of a worldwide 2002-2003 study of e-commerce.

**METHODOLOGY**

Various Internet portals such as "www.nua" were utilized to locate current articles of interest. Subject matter covers individual country issues, technology, privacy, taxes, security, fraud, B2B and B2C sales and trends. Traditional academic journals and refereed proceeding articles were not covered for this article.

**RESULTS/DISCUSSION**

**Countries**

**Europe**

Broadband usage is increasing across the continent (www.nua.ie/surveys, Dec 06, Reed Electronics Research). However, Spain and Italian users are becoming skeptical about its use (www.nua.ie/surveys, Nov 22, Jupiter Research). Europeans set to adopt “feature-rich” mobiles (smart phone); prediction: over 278 million smart phone owners by the end of 2007 (www.nua.ie/surveys, Nov 20, Analysis). Government use of the Internet is also increasing: France, Italy and Spain have outpaced the UK and Germany (www.nua.ie/suverys, Nov 25, IDC).
United Kingdom
E-commerce sales by final consumers have doubled over the last year and are outpacing the US by a factor of three (www.nua.ie/surveys, Dec 13, IMRG). Concomitant with these increases are a 50% increase of B2B ordering, almost a doubling of online presences by firms (www.nua.ie/surveys, Dec 3, Department of Trade and Industry). Concomitant with these changes is an epidemic of spam and increase in disciplinary cases against employees; main reasons: email and Internet abuse (www.nua.ie/surveys, Nov 22, IMRG).

Ireland
Over the next year, the use of DSL is estimated to increase by 25%, particularly by business (nua, Dec 3, ComReq).

France
Thirty-three percent of the population is now on-line (www.nua.ie/surveys, Nov 29, Europemedia); there has been a 124% increase in shopping since 2001 (www.nua.ie/surveys, Nov 21, Europemeida); and about 20% of the user population now has broadband (www.nua.ie/surveys, Nov 14, Europemedia). Most users are in the 16 to 24-age range. 17.24 million people were online during October (=33.9% of population); mainly Internet communications have increased (most users from age group 16 – 24).

Belgium
It appears that the status quo in terms of numbers has been maintained over 2002, but the user times have increased due to the increased use of broadband (www.nua.ie/surveys, Nov 21, InSites).

Germany
B2C sales will reach EUR8 billion by the end of 2002, which is an increase of more than 60% over 2001. Ten percent of total sales will be attributed to the holiday season (nua, Dec 13, Deutsche Welle).

Spain
Business firms are beginning to better utilize the Internet for marketing and sales purposes (nua, Dec 9, Europemedia).

Russia
Russia is working on increasing the number of Internet users by 800% over the next three years and is attempting to improve satellite technology for Internet access (nua, Nov 29, Europemedia).

Ukraine
While the number of users is increasing to 4.5% of the population by the end of 2002, broadband has just been introduced. Progress is slow due to poor infrastructure, lack of legislation, low standard of living (nua, Nov 28, Information Society of Ukraine).
Marketing

Supply Chain Management
In many ways, Europeans have led the way in developing a theoretical conceptualization of the effect of e-commerce on the supply chain. Many aspects of e-commerce are essentially supply chain management problems, with the elimination of middlemen as a probable long-term consequence for certain strategies (Tosh, 1999). Supply chain “shortening” is not a certainty, however. While wholesalers, distributors, or retailers in some industries may find that it is more efficient to eliminate one of the links in the supply chain for more direct access to the consumer, other industries may find that task specialization drives how supply chains evolve.

Economist Ronald Coase (1999) used his theory of transaction costs to argue that supply chain efficiency will increase as firms contract out those activities for which they are ill-equipped, allowing them to expand their core businesses without taking on additional tasks related to the expansion. He further argued that it makes sense to contract out those activities for which transaction costs decrease faster than organization costs, but to retain those activities that have lower organization costs than transaction costs.

Operationalizing these ideas, however, requires implementation of supply chain strategies, an area that needs further development among some European industries. For example, a report from UK’s Department of Trade and Industry indicates that small businesses are lagging behind larger companies in the adoption and use of e-commerce (www.nua.ie/surveys, Dec 3, 2002, Department of Trade and Industry; Sullivan, 2002).

For business-to-business (B2B) e-commerce, choices about supply chain management are highly dependent on the basic level of vertical integration selected, as well as contractual agreements between e-commerce distributors and suppliers. Developments in business-to-business e-commerce are shaping contractual and transactional efficiencies – and growing rapidly in Europe. B2B sales among UK businesses increased 36% between 2002 and 2001, while Hungary just launched WebBusiness for B2B transactions. Among the most important developments are the establishment of on-line B2B marketplaces (Brack, 2000; Buss, 2000; Carbone, 1999; Fraza, 2000; Hahn, 1999; Jastrow, 1999; Johnson, 2000), extensions of Enterprise Resource Planning (ERP) systems to include Web transactions (Barnes, 1999; Boudette, 2000; Menezes, 2000), and standardization of procurement forms for use in Web transactions (Bort, 1999; Tedeschi, 2000). Rapid development is somewhat hampered by the lack of existing standards for extensible markup language (XML) (Berry, 2000; Bort, 1999; King, 1999; Messmer, 1999; Tedeschi, 2000), but software companies are writing programs using what may become defacto standards.

Software
Many European companies have been at the forefront of software development for use in e-commerce. In particular, SAP AG has been the leader in development of ERP software. Throughout the 1990’s, ERP systems allowed the replacement of legacy systems with highly integrated supply chain management systems. Transaction synchronization includes real-time data processing in accounting, sales, distribution, manufacturing, planning, purchasing, and human resources. Second generation ERP systems, also known as ERP II, extended ERP, or
XRP allow vendors to create web-centric systems by consolidating data and allowing dynamic access from various clients. These more advanced versions are Web-enabled, collaborative, and in some cases, wireless (Russell and Taylor, 2003).

Europe leads in some wireless technology as well. Psion created the EPOC operating system to handle wireless voice and data operations and was specifically designed for handheld devices. The EPOC operating system is considered advanced in terms of its functionality. Along with partners Ericsson, Nokia, and Motorola, Psion is positioned to create the standard operating system for wireless e-commerce based on integration with cellular phone technology (Tjahyadikarta and Schilling, 2003).

Logistics

New developments in logistics are easing some of the difficulties for e-commerce deliveries and transactions. Trade in Europe involves a stunningly complex matrix of language barriers, currency conversions, duties and tariffs, and landed costs that makes automation a necessity for any company involved with international shipments. Currently, software is available to reduce the obstacles in inter-country trade. International trade logistics software is used to convert language and currency, provide information on tariff, duty, and customs processes, and allow some links with financial institutions to facilitate letters of credit and payment. In essence, the software allows ease of calculating landed costs of products (Russell and Taylor, 2003).

Among new developments in delivery are efforts by FedEx, DHL, and TNT to provide more automated features for tracking orders, speeding deliveries, and easing computation of costs. FedEx is particularly ambitious in Europe, having developed a comprehensive strategy of integrated customer order process management. Included in its strategy is an option for complete order fulfillment services, its first step toward becoming a 3PL-logistics provider (Ng and Farhoomand, 2003).

Connectivity

“The percentage of European households with internet access was 40% in June 2002. Gains in household access seem to be leveling off, suggesting that some countries may be approaching saturation, though 71% of EU users prefer to use the internet from home. More technologically advanced northern European countries top 50% in access, while countries like Greece lag behind with less than 10% penetration. Table 1 lists access rates for each EU country. Frequency of use is highest in Scandinavia (Europe Online, 2002). Among Eastern and Central European countries, Estonia tops access rates with 39% of the population online, while other countries lag: Latvia (16%), Lithuania (18%), Ukraine (4%), Republic of Czechs (28%), Slovakia (24%), Bosnia and Herzegovina (1.5%), Slovenia (30%), Croatia (20%), Poland (19%), Romania (12%), and Russia (8%)” (www.nua.ie/surveys, 2002).
Table 1
Households with Internet Access in the European Union (June 2002)

<table>
<thead>
<tr>
<th>Country</th>
<th>%</th>
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<tbody>
<tr>
<td>Netherlands</td>
<td>65</td>
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<tr>
<td>Denmark</td>
<td>65</td>
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<tr>
<td>Sweden</td>
<td>64</td>
</tr>
<tr>
<td>Luxembourg</td>
<td>55</td>
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<tr>
<td>Finland</td>
<td>54</td>
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<tr>
<td>Austria</td>
<td>49</td>
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<tr>
<td>Ireland</td>
<td>48</td>
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<td>United Kingdom</td>
<td>45</td>
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<tr>
<td>Germany</td>
<td>44</td>
</tr>
<tr>
<td>Belgium</td>
<td>41</td>
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<tr>
<td>France</td>
<td>36</td>
</tr>
<tr>
<td>Italy</td>
<td>35</td>
</tr>
<tr>
<td>Portugal</td>
<td>31</td>
</tr>
<tr>
<td>Spain</td>
<td>29</td>
</tr>
<tr>
<td>Greece</td>
<td>9</td>
</tr>
<tr>
<td>EU-15 Average</td>
<td>40</td>
</tr>
</tbody>
</table>

**Taxes**

The EU finance ministers approved imposing value added taxes (VAT) to products such as software, computer games, and other digital items that are sold to EU customers through the Internet. The new regulations will go into effect July 2003 (www.proquest.umi.com, Intellectual Property and Technology Law Journal; Aug 2002). The new rules are supposed to counter an “unfair advantage” enjoyed by non-EU traders, who have not been subject to the VAT and were able to sell their products at a lower price (www.ecommercetax.com, June 16, 2002). The agreement has angered American companies, while the European actions are a response to the US government’s actions.

**Censorship**

Pornography is the most censored Internet content. The Council of Europe has censored racist and xenophobic displays on the Internet as part of the fight against discrimination, which also served to improve international cooperation in this area (www.nua.ie, November 11, 2002).

**Privacy**

In May 2002, even though the European Parliament accepted several new policies to privacy laws, such issues continue to be violated in the fight against terrorism, according to a report from the international media-rights organizations, Reporters without Boarders. Western democracies increased their Internet surveillance and therefore challenged the Internet Freedom and Net users’ privacy (www.nua.ie, September 5, 2002).

**Venture Capital**

“These by the end of 2000 the venture capital bubble had burst. The dot-com to the dot-bomb era has had a chilling effect on venture capital availability worldwide. Today valuations have plummeted. Many dot-coms have ceased their business; been acquired or merged; or been delisted due to low stock prices. Today, one estimate puts it at $US 1.300 Trillion of valuations needed to yield only an 18% return for the class of 1999 fundings.”
The impact all this has had on early stage firms has been to significantly diminish the amount of capital availability. If the number of start-ups dependent on outside sources of capital has not diminished, they have been slowed in their development. The number of firms going public is at a long time low worldwide. For example, Information Technology IPOs for the first three quarters of 2000 numbered 78, while in the fourth quarter they numbered only 10. US based firms represented 61 of the 78 total, while the others were from Europe (5), Asia (4) and other regions (9). In 2001 the total number of IPOs worldwide was 17, 15 from the US, with only 2 from other parts of the world. In 2002 (E) the number is 11, with only 1 in Asia. These trends are representative of other industry sectors as well.

For start-ups and early stage firms, at the end of 1999 in the US USD 12.2 billion was put into early stage firms and over USD3.1 billion in seed firms and startups. At the end of the third quarter 2002 for the three quarters USD3.4 billion went into early stage firms and only USD280 million into start-ups. In the third quarter USD982 million went to early stage firms and only USD63 million was put into seed funding.

Overall the lack of capital has resulted in likely fewer firms starting and ultimately fewer jobs created, thus not greatly contributing to the continued worldwide economic challenges. However, is this all bad? Could a renewed emphasis for early stage firms on prior experience and on business planning and performance be a bad thing? Could niche markets with elements of differentiation be inappropriate for a start-up? Perhaps venture capitalists have moved back to the past when the traditional selection paradigm of ‘management, management, management, niche and differentiation’ worked well for them? Perhaps as others engaged in the rush to market in the frenzy of the late 1990s those that found that sticking to their business principles while difficult, became the winners of the new millennium (www.nua.ie/surveys, 2002).” (Kiefer et al., 2002)

**Economy**

“At present, inflation is holding steady at a forecasted 2.2% for the year. Economic growth has slowed to a relatively flat 0.3%. While the UK’s economy is picking up, Germany’s economy is not recovering as much as expected. Economic growth forecasts for Western Europe hover around 2% for 2003. Eastern Europe is increasing its on-line activities, while adequate capital remains an issue for infrastructure development. Taxation remains an issue. Security both from virus attacks and fraud continue to be a problem, as well as privacy issues and differences with the US over them.

In spite of the economy e-commerce is continuing its upward surge. The EU is pushing for member countries to promote and utilize on-line purchases. While Web based shopping remains less popular in Europe than in the US, and economic woes slow many Eastern European countries, overall e-commerce transactions continue to expand rapidly. While initial adaptation to e-commerce had been slow, more than half of European firms are now on the Web. Holiday shopping for the EU is predicted to be high, pacing the rest of the world. B2B sales continue to increase with a prediction that by 2006 e-commerce will account for 22% of all such sales. B2C sales have now doubled from the previous year (June 2001 to June 2002). Experts predict over
27 million e-workers by 2010 which include dot-com related employees; self employed; teleworkers; and multilocation workers (www.nua.ie/surveys, 2002).” (Nemetz-Mills, 2002)

**SUMMARY/CONCLUSIONS**

What does it all mean: in spite of terrorism; challenged economies; and continuing tax/fraud/secrecy/security issues, e-commerce sales have continued to rapidly grow. While a number of dot-coms have merged, been acquired, or closed, Europe seems to be less hard hit than the US by the dot-bombs. While venture capital availability has diminished, a healthy entrepreneurial climate exists in Europe, more so than in the US. Perhaps the US lead dot-com greed has enhanced European entrepreneurship at the marketing interface and diminished it in the US.

**REFERENCES**


