E-COMMERCE: CONCEPTS, PERSPECTIVES AND CHALLENGES

Larisa DODU-GUGEA
PhD, Assist. Prof., Academy of Economic Studies of Moldova
E-mail: dodu_gugea@yahoo.com

Livia TÎBÎRNĂ
Academy of Economic Studies of Moldova

Abstract

Internet commerce has become the frontier for businesses around the world. Traditional. The Internet's World Wide Web has become the prime driver of contemporary E-commerce. This paper presents a hierarchical framework of E-commerce development, as well as of analysis, range from the wide-area telecommunications infrastructure to electronic marketplaces and electronic hierarchies enabled by E-commerce. Several nodal problems are discussed that will define future development in E-commerce.

Keywords: Internet commerce, World Wide Web, E –commerce, problems, business transactions, customers.

Introduction to e- commerce

There are many different definitions and understanding about E-Commerce.

Vladimir Zwass defines e-commerce as "… the sharing of business information, maintaining business relationships, and the conducting business transactions by means of telecommunications networks" [9, p.3]. He pointed out that e-commerce includes not only buying and selling goods over Internet, but also various business processes within individual organizations that support the goal.

G. Winfield Treese and Lawrence C. Stewart gave their view of Internet-commerce as follows: "… the use of the global Internet for purchase and sale of goods and services, including service and support after the sale. Historically speaking, the best known idea in electronic commerce has been Electronic Data Interchange (EDI)" [8] p.6]

So E-Commerce is a methodology of modern business, which addresses the need of business organizations, vendors and customers to reduce cost and improve the quality of goods and services while increasing the speed of delivery.

Table1. Traditional Commerce v/s E-Commerce

Traditional Commerce	E-Commerce
Heavy dependency on information exchange from person to person.	Information sharing is made easy via electronic communication channels making a little dependency on person to person information exchange.
Manual intervention is required for each communication or transaction.	The whole process is completely automated.
Communications of business depends upon individual skills.	In e-commerce, there is no human intervention.

Source: elaborated by authors

Generally speaking, when we think of e-commerce, we think of an online commercial transaction between a supplier and a client. However, and although this idea is right, we can be more specific and actually divide e-commerce into six major types, all with different characteristics. E-commerce business models can generally be categorized into the following categories:

- ✓ Business - to - Business (B2B). A website following the B2B business model sells its products to an intermediate buyer who then sells the product to the final customer. Following are the key technologies used in B2B e-commerce: Electronic Data Interchange (EDI), Internet, Intranet, Back-End Information System Integration. (*freemarket.com*)
- ✓ Business - to - Consumer (B2C). A website following the B2C business model sells its products directly to a customer. A customer can view the products shown on the website. The customer can choose a product and order the same. (*amazon.com*)
- ✓ Consumer - to - Consumer (C2C). A website following the C2C business model helps consumers to sell their assets like residential property, cars, motorcycles, etc., or rent a room by publishing their information on the website. Website may or may not charge the consumer for its services. Another consumer may opt to buy the product of the first customer by viewing the post or the advertisement on the website. (*e-bay.com*)
- ✓ Consumer - to - Business (C2B). In this model, a consumer approaches a website showing multiple business organizations for a particular service. The consumer places an estimate of amount he/she wants to spend for a particular service. For example, the comparison of interest rates of personal loan/car loan provided by various banks via websites. A business organization who fulfills the consumer's requirement within the specified budget, approaches the customer and provides its services. (*priceline.com*)

- ✓ Business - to - Government (B2G). B2G model is a variant of B2B model. Such websites are used by governments to trade and exchange information with various business organizations. Such websites are accredited by the government and provide a medium to businesses to submit application forms to the government.
- ✓ Government - to - Business (G2B). Governments use B2G model websites to approach business organizations. Such websites support auctions, tenders, and application submission functionalities.
- ✓ Government - to - Citizen (G2C). Governments use G2C model websites to approach citizen in general. Such websites support auctions of vehicles, machinery, or any other material. Such website also provides services like registration for birth, marriage or death certificates. The main objective of G2C websites is to reduce the average time for fulfilling citizen's requests for various government services.

For ecommerce retailers, website security is the cornerstone of a successful online business. Why? It's simple: customers will lose his/her faith in e-business if its security is compromised. Following are the essential requirements for safe epayments/transactions:

- ✓ Confidentiality - Information should not be accessible to an unauthorized person.
- ✓ Integrity - Information should not be altered during its transmission over the network.
- ✓ Availability - Information should be available wherever and whenever required within a time limit specified.
- ✓ Authenticity - There should be a mechanism to authenticate a user before giving him/her an access to the required information.
- ✓ Encryption - Information should be encrypted and decrypted only by an authorized user.
- ✓ Auditability - Data should be recorded in such a way that it can be audited for integrity requirements.

I. Why the internet and why now?
Drivers and barriers for online shopping success.

There are many reasons for so-called dot-com companies to get involved in Internet commerce:

- Using e-commerce, organizations can expand their market to national and international markets with minimum capital investment.
- E-commerce improves the brand image of the company.

- E-commerce helps organizations to provide better customer service, to simplify the business processes and makes them faster and efficient.
- E-commerce reduces the paper work.
- E-commerce increases the productivity of organizations.

There is what motivates consumers to purchase online:

- It provides 24x7 support. Customers can enquire about a product or service and place orders anytime, anywhere from any location.
- E-commerce application provides users with more options to compare and select the cheaper and better options and quicker delivery of products.
- A customer can put review comments about a product and can see what others are buying, or see the review comments of other customers before making a final purchase.
- E-Commerce increases the competition among organizations and as a result, organizations provides substantial discounts to customers.

The following are some of the advantages that e-commerce offers to the society:

- Customers need not travel to shop a product, thus less traffic on road and low air pollution.
- E-commerce helps in reducing the cost of products, so less affluent people can also afford the products.
- E-commerce has enabled rural areas to access services and products, which are otherwise not available to them.
- E-commerce helps the government to deliver public services such as healthcare, education, social services at a reduced cost and in an improved manner.

The disadvantages of e-commerce can be broadly classified into two major categories:

Technical Disadvantages:

✓ There can be lack of system security

✓ In many countries, network bandwidth might cause an issue

✓ Sometimes, it becomes difficult to integrate an e-commerce software or website with existing applications or databases

Non-Technical Disadvantages:

✓ Initial cost: The cost of creating/building an e-commerce application inhouse may be very high

- ✓ User resistance: Users may not trust the site being an unknown faceless seller. Such mistrust makes it difficult to convince traditional users to switch from physical stores to online/virtual stores
- ✓ Security/ Privacy: It is difficult to ensure the security or privacy on online transactions
- ✓ Lack of touch or feel of products during online shopping is a drawback
- ✓ E-commerce applications are still evolving and changing rapidly
- ✓ Internet access is still not cheaper and is inconvenient to use for many potential customers, for example, those living in remote villages.

II. Around the world

Cross-border e-commerce is a growing phenomenon. More than half of customers (57%) say they purchased from an e-tailer outside their country's border in the past six months.[2] p.6-11]

1. The magic of Search and the Consumer Buying Behaviour

Online research is a common practice across the globe, but there are some cultural differences. The respondents of Nielsen Global Connected Commerce Survey (Q4 2015) in Asian countries such as Thailand, the Philippines, India and China frequently research products online before buying in stores or use online reviews to help make grocery purchasing decisions. Online research and reviews are also used frequently in Spain and Nigeria. The importance of online research in all of these markets is likely driven by wide variation in product quality, the prevalence of social networks and the importance of keeping up with thelatest trends.

Clothing is the top category purchased online in every region except North America (the U.S. and Canada). More than half of all respondents in the online study (55%) say they've ever purchased fashion products online. Travel products are among the top five categories purchased online in every region and books are among the top five everywhere except the countries in the Middle East. In fact, books/music/stationery tops the list of categories purchased in the U.S., Australia, Japan and South Africa.

South Korean respondents report the highest incidence of buying clothes online (77%) and Japan had the highest levels of purchasing of books/music/stationery (79%).

2. Payment practices : Credit, digital or cash on delivery?

E-commerce sites use electronic payment. Electronic payment has revolutionized the business processing by reducing the paperwork, transaction costs, and labor cost. Being user friendly and less time-consuming than manual processing, it helps business organization to expand its market reach/expansion. Listed below are some of the modes of electronic payments:

- ✓ Credit Card
- ✓ Debit Card
- ✓ Smart Card (Smart card is similar to a credit card or a debit card in appearance, but it has a small microprocessor chip embedded in it. It has the capacity to store a customer's work-related and/or personal information. Mondex and Visa Cash cards are examples of smart cards.)
- ✓ E-Money (Online payments done via credit cards, debit cards, or smart cards are examples of e-money transactions. Another popular example is e-cash.)
- ✓ Electronic Fund Transfer - EFT (It is a very popular electronic payment method to transfer money from one bank account to another bank account. Fund transfer can be done using ATM (Automated Teller Machine) or using a computer. Nowadays, internet-based EFT is getting popular.)

In order to sell, retailers must make it easy for consumers to buy. So which payment methods are the most preferred? It depends on where you ask.

Around the world, credit cards are the most commonly used payment method. More than half of online respondents who say they shopped online during the past six months paid with a credit card (53%). [3, p.6-12] In addition, roughly four-in-10 used a digital payment system such as PayPal or Alipay (43%), debit card (39%) or direct debit from their bank account (38%).

During the past six months, 66% of U.S. online shoppers and 81% of Canadian online shoppers say they paid with a credit card, well above the percentage that used the next closest option—debit card in the U.S. (38%) and digital payment systems in Canada (41%). Credit card is also the most used payment option in several of the Latin American countries in the study (52% - 80% across the countries) and Japan and Korea (76% and 79%, respectively).

In India, cash on delivery is the most widely used option, cited by 83% of online respondents. The popularity of cash on delivery is driven by a few factors. There is a sizeable group of unbanked consumers in India, credit card penetration is relatively low, and many consumers avoid paying with plastic due to security concerns. Moreover, e-commerce is still in its early stages of development in the country, and the ability to touch, feel and try on merchandise prior to purchasing reduces the risk of not getting what they paid for.

Cash on delivery is also popular in many other developing markets, including Nigeria (76%), the Philippines (73%), Russia (70%), United Arab Emirates (68%), Saudi Arabia (59%), Colombia (57%), Poland (57%) and Thailand (56%).

Retailers looking to expand internationally need to understand local market nuances and cater their offerings accordingly. Increasing the number of available payment options can improve the odds of converting browsers to buyers.

III. Feel the pulse of the market

1. The 5 digital commerce and marketing trends to look out for in 2017:

✓ Consumers will use mobile to make high-value purchases. Desktop was once the king of high-ticket purchases, but in 2017, consumers will feel equally comfortable purchasing expensive items on smartphones. The AOV (Average Order Value) on mobile apps was 27 percent higher than desktop in Q2 2016 [10] p. 17]. *Implications for retailers*: Ensure a perfect mobile checkout experience for every transaction.

✓ Retailers will seek opportunities to pool resources as they face increasing competition from Amazon. In 2017, a growing number of independent companies will enable retailers to pool resources to better compete with Amazon and decrease dependence on Facebook and Google. Implications for retailers: Look for the right partnerships in 2017. *Retailers need to* partner with technology companies that can make their products more discoverable online.

✓ Product Listing Ads will emerge as a key channel for customer acquisition. In 2017, retailers will invest more in Google Shopping and expand their search capabilities to improve customer discovery and conversions. *Implications for marketers*: Focus on discovery with continued pressure on efficiency. Retailers should invest in search channels.

✓ Manufacturer brands will demand more transparency in trade marketing. *Implications for retailers*: Manufacturers will direct budgets to programs that demonstrate sales growth at scale.

✓ Developed markets, too, will prioritize mobile over desktop, modeling emerging markets. In 2017, expect a majority of online retailers to become “mobile first” brands. Asia, especially China, leads the world in share of mobile sales and in mobile innovation, such as in-store payments, taxi hailing, and other superior user experiences [11]. With mobile becoming the primary digital channel to interact with consumers, retailers must make mobile the priority in their site designs.

2. How people will shop in 10 years?

We don’t have a crystal ball and can only guess about the future, but Ovum issued in 2016 a report called “The Future of E-commerce: The Road to 2026”.[12] We will try to share the most interesting prediction from this report.

The desire for instant access and fast turnaround, 24/7, will be the norm by 2026, driven in particular by millennial (born approximately 1980–95) and also by Generation Z consumers (born approximately 1996–2010). Generation Z are digital natives to the power of 10, with technology use their second nature. These generations are constantly connected and inhabit an online environment where events happen in real time without them having to wait, and where social media enables them to dictate terms.

The desire for shopping experiences will intensify. By 2026, many consumers will want retailers to provide an environment where shopping is an event experience in its own right. This will translate into a world where augmented reality (AR) plays a key role.

There are a number of factors driving this trend. Many consumers today already treat shopping as a leisure activity. Another driver is the seemingly insatiable need for people to showcase their participation in activities and experiences on social media. Retailers will increasingly align not only their brands but also the shopping experience itself to this consumer desire. In 2015, Victoria's Secret encouraged shoppers to take selfies in front of displays and show them to sales assistants in return for a free gift – and hopefully share their selfies/experiences with friends.

IKEA has also developed a table as part of its concept kitchen that suggests recipes based on the ingredients on the table, which is a great example of AR working in the real world, potentially.

The sharing economy will become more pronounced by 2026. Smart retailers will need to learn how to exploit the *sharing economy* to their benefit, and there are several examples of retailers that have found innovative and creative ways to do this. One example is the partnership between Marks & Spencer (M&S) and the charity Oxfam. For three years, M&S and Oxfam ran a program whereby consumers could donate old M&S clothes to Oxfam charity shops and, in return, receive a discount voucher against new M&S apparel. This type of program has since been copied by other retailers, such as H&M and Ikea. Ikea allows customers to return their unwanted Ikea furniture to participating stores, where it is resold or donated to charity.

Online moves into the real world. The online giant Amazon has opened its first physical Amazon Books in Seattle in late 2015, following experiments with pop--up stores. In January 2016 Alibaba, China's leading e-commerce player, opened its first physical store in Tianjin (a Free Trade Zone), North China to boost sales of its imported products.

Today, the majority of retailers are utilizing pickup. In the UK, which has the most mature click-and--collect retail market (A shopping facility whereby a customer can buy or order goods from a store's website and collect them from a local branch), the value of goods collected in store is expected to rise by 78 percent by 2020.

The widespread adoption of increasingly powerful smartphones with larger screens is improving the m-commerce experience. Meanwhile, more and more retailers are optimizing their sites for mobile shopping. At the global level, Android--based smartphones will continue to dominate the market going forward and eclipse Apple iOS devices.

IV. Managing paradoxes in ecommerce

There's a negative side to offering shoppers so many choice via ecommerce. The problem is getting worse and screams for a solution.

In his recent blog "The Dark Side of eCommerce"[13], Darren Hitchcock showcases the challenge of offering too much choice – many items in a retailer's offer just don't get consideration. He cites a RichRelevance that found "only 44% of products online are getting attention; leaving 56% bypassed. Furthermore, just 10% of products on an online retail site garner 75% of page views."

The explosive growth of transactional and online shopper data means consumers are swamped with information. In just one internet minute, there are now 2m Google search queries, £83,000 in sales on Amazon.co.uk, 100,000 new Tweets and 6m Facebook views. [14] This leaves consumers with overwhelming choice.

The author stresses the need for greater personalization in order to draw attention to products. Two examples are Asos, which offers dedicated online advisers, and the new L'Oreal Paris USA website, which invites customers to create their own user profile to drive product offerings.

Site search is a vital feature for ecommerce sites, as it allows visitors to take a shortcut to the products they have in mind. On ecommerce sites, up to 30% [7] of visitors will use the site search box. So users should be able to find products quickly, and with a minimum of cognitive effort.

References

[1]CRITEO "eCommerce Industry Outlook", 2016 (Disponible at http://www.criteo.com/media/3588/criteo-ecommerce-industry-outlook-2016.pdf)

[2] NIELSEN "Global Connected Commerce. Is e-tail therapy the new retail therapy?", 2016 (Disponible at https://www.nielsen.com/content/dam/nielsenglobal/jp/docs/report/2016/Nielsen-Global-Connected-Commerce-Report-January-2016)

[3] Nielsen Global Connected Commerce Survey, Q4 2015

[4] OSTROFSKY M. "Get Rich Click!", Free Press 2013, ISBN: 978-1451668391

[5] OVUM "The future of e-commerce. The road to 2026" (Disponible at http://www.criteo.com/media/4094/ovum-the-future-of-e-commerce-the-road-to-2026.pdf)

[6] REYNOLDS J. "The Complete E-Commerce Book: Design, Build, & Maintain a Successful Web-based Business", Second Edition 2004, ISBN:1578203120

[7] SAMPLE-Econsultancy-Ecommerce-Best-Practice-Compendium, 170+ tips and recommendations to improve your conversion rates 2016

[8] Treese , L. C. Stewart L. C. "Designing Systems for Internet Commerce", 2nd ed, Addison-Wesley 2003, IBSN: 0-201-76035-5

[9] Zwass Vladimir "Electronic Commerce: Structures and Issues", International Journal of Electronic Commerce, Volume 1, Number 1, Fall, 1996, pp. 3 - 23. (Disponible at http://www.ijec-web.org/v1n1/p003full.html)

[10] Source: Criteo, State of Mobile Commerce Report, H1 2016 US

[11] http://www.criteo.com/media/6443/criteo-digital-commerce-marketing-trends-2017.pdf

[12] https://magenable.com.au/researches-2/ecommerce-future-trends-will-shape-retail-2026/

[13] https://econsultancy.com/blog/62619-the-dark-side-of-ecommerce (Published 1 May, 2013 by Darren Hitchcock

[14] http://www.brickmeetsclick.com/managing-the-paradox-of-choice-in-ecommerce