



## E-commerce as a model of entrepreneurship

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### Abstract

*The aim of this paper is to point to the increasing level of use of internet by modern business organizations, and new technologies which offer business organizations the possibility to create conditions and new approaches to business as well as the excellent preconditions for the development of online shops.*

*Online commerce is based on information, innovation, and creativity, and its occurrence is followed by an increasing level of integration and globalization, integrating the goods, services and capital on the global market.*

*Also, the paper presents the possibility of proper utilization of social networks in order to establish and expand quality business operation of the company in the field of online shops because social networks provide an excellent opportunity for internet advertising, promotion, and business improvement.*

*The capability of enterprises to trade in the online world will soon be the precondition for a successful participation in the global market and increased competitiveness.*

**Keywords:** *online shop, internet, social networks, promotions, marketing, increasing competitiveness*

### 1. E-COMMERCE AS A RESULT OF INTERNET EXPANSION

Internet has, nowadays, achieved absolute expansion. There is hardly a person who does not use internet on a daily basis for business, studying or entertainment. Today, internet literacy can be regarded as general knowledge. The occurrence of internet was, logically, followed by the development of new professions. One of the results of internet development is online marketing and online shopping. E-commerce primarily implies distribution, buying, selling, marketing and servicing of products by using the electronic systems such as internet and other computer networks. It also involves electronic money transfer, supply chain management, e-marketing, electronic exchange of information and automatic systems for data collection. Its functioning is based on the use of electronic communication technology, i.e. extranet, electronic mail, e-books, data base and mobile phones. <sup>[1]</sup> E-commerce means running business online and it does not imply only buying and selling, but the entire organization of a company in a network environment, as

well as the organization of business communication with clients and customer care. <sup>[2]</sup>

The concept of electronic commerce is much broader and it is not limited to internet only. E-commerce is a multidisciplinary concept which influences the models of interaction and negotiation with the clients, payment methods, as well as the relationship with the suppliers, which all require new legal framework. E-commerce is a set of intangible relations maintained by economic agents. This definition refers to all types of transactions conducted over the internet, phone, bank network and alike, but also to all payment methods regardless of the type of money involved, cash or e-money. <sup>[3]</sup> The business world today is in the process of very rapid and numerous changes (globalization of the economy, the swift growth of e-commerce, the increasing pace of business operations, rapid obsolescence of technological novelties, the rapid expansion of new companies in the world market), which inevitably imposes the need for the development of new models and forms of business. <sup>[4]</sup>

The future of e-commerce in Serbia does not depend solely on individuals, but also on other state institutions

and business entities, which have not yet been adequately organized to facilitate communication, information and provision of services through the Internet. Global experience shows that online trade is the most profitable form of trade, and the reasons for such high profitability lie in simplicity and lower operating costs. In addition, internet shopping has no working hours, so shopping is possible for 24 hours a day, all year round, while the products are available and offered to Internet users. Millions of Internet users in the world represent potential customers for electronic stores whose activity is just one Internet site in place of business space. The Internet market is the world's largest emerging market, with enormous growth potential. The existence of a quality offer easily identifies users for online shopping because it involves a greater choice, a simpler comparison of prices, and the ability to deliver to a home address, which allows the customer to save time. Also, all information about the product in an online store can be quickly and easily changed, so that updated information very quickly arrives to customers. When it comes to online shopping in Serbia, users still do not have enough confidence to use their payment cards online, which is one of the major problems and obstacles in e-commerce. Only 10% of online payment card users actually buy online. In the European Union countries, over 60% of the trade is done electronically, and 14% of the population buys something electronically every day. Despite the efforts of the expert public to promote the benefits of online shopping for the local economy and citizens, the shifts made in the previous decade are very small and are reduced to individual cases, whose knowledge, inventiveness and enthusiasm do not significantly affect the overall picture. Serbia has very few bidders and e-commerce users and its share in total turnover is negligible. In Serbia, only a few companies operate in this way. Obviously, solving such problems is within the competence of state authorities. The Ministry of Trade and Services has recently accepted the initiative of the Belgrade Chamber of Commerce on the implementation of certain measures to promote the development of electronic commerce and before the adoption of appropriate laws. It was accepted to alter the value of goods that were exempted from import duties and to amend the Customs Ordinance on customs clearance procedures in order to enable legal entities dealing with e-commerce to benefit from the treatment of an expert shipments arriving from abroad, submitting a consolidated manifest of incoming shipments, and announcing the arrival of shipments for more efficient customs clearance. If they adopted as soon as possible and began to apply the appropriate laws and accepted other submitted proposals for an economically stimulating environment, a much more favorable environment for the development of e-commerce and Internet shopping in Serbia would be created, and then its potential increased participation in the total export of the country.

Social networks today represent a concept which is supported by most of the population in our country, and it is this concept which can be used as a mean of

excellent electronic business.<sup>[5]</sup> Recent advancements in web technologies and the emergence of social media concepts and tools have led to the emergence of new developments that affect electronic commerce. These developments enable and encourage consumers to participate actively in the buying and selling of products and services in online marketplaces and communities. The main purpose of e-commerce for most of the companies is to reduce the costs or add value to the existing product, but also to create the possibility of acquiring new potential buyers which is at the same time the key role.<sup>[6]</sup>

Khalid Alrawi's study presents the conclusions according to which the use of internet for a company's advertising greatly affects the quality of marketing. Managers believe that huge economic benefit can be gained from internet advertising.<sup>[7]</sup>

This new phenomenon is commonly referred to as social commerce, which can be described as the use of social media tools and Web 2.0 technologies in e-commerce. Social commerce is having a profound impact on business processes and on social interactions among consumers.<sup>[8]</sup> Indeed, within this environment, consumers are exposed to a more social and collaborative online shopping experience wherein collective intelligence can be aggregated and harnessed to support a superior understanding of purchases and more accurate shopping decisions.<sup>[9]</sup> Online merchants can identify consumer behaviors, preferences and expectations to help them deliver better services.<sup>[10]</sup> Distinct from traditional e-commerce, which focuses on enhancing the efficiency of online shopping, social commerce delivers a rich social, interactive and collaborative online shopping experience.<sup>[11]</sup> As such, e-commerce is shifting from product-centered marketplaces to a consumer-oriented environment aimed at developing closer relationships with consumers, increasing consumer participation, creating new business opportunities and supporting product and brand development.<sup>[12]</sup>

There are more problems in our country that make it difficult to develop e-commerce. When we start from the highest in the hierarchy, it is certainly a matter of laws and administrative areas that do not yet clearly define the possibilities of entrepreneurs in e-commerce, although this is already the case. After that, there is also a problem of insufficient development of information technologies that will enable entrepreneurs to more easily implement their ideas in this area. Entrepreneurs generally base their foundation on their own ideas and capabilities, but below, one way is shown, as it is possible through the php web application to develop the possibility of e-commerce, whose process is primarily facilitated by the enterprise itself.

## 2. E-COMMERCE POTENTIALS

### 2.1 Increase of e-commerce use

More than 1.2 million people in Serbia did shopping online in 2016, which is about 5% more compared to 2015, and 30% more compared to 2013. This

conclusion was made at the meeting on E-commerce services held by UniCredit bank and Visa company.<sup>[13]</sup> However, in spite of the positive indicators, Serbia is still below the European average considering that there are more than 57% of internet users in our country who have never ordered any products or services online. Unicredit bank stated that this means that our market has considerable potential for the development and improvement of online services and commerce. As for the habits of online users in Serbia, internet is typically used for online shopping of airplane tickets (68%) and telecommunication services (13%). These services are also used for online shops (8%), paying bills (7%), and payment of a number of different services (3%).

E-commerce is the fastest growing segment of payments industry where the shopping using mobile phones has made a dramatic rise. In June, 2016, Google Company published a statistical report on users in Serbia.<sup>[14]</sup>

This in-depth report points out to 3 today's top online trends:

- Shopping is shifting to the online world,
- Buyers are moving to mobile platforms,
- Unfulfilled potential of the videos.

The ratio of users who use internet at least once a day is 8/10. More than 51% of them are people under 34 years of age.

Today, the average citizen of Serbia owns 1.9 devices to go online out of which 13% are tablets, 50% smart phones, and more than 55% are desktop computers. In most cases, users typically search the internet in order to find the best way to buy certain product or service. When searching the internet before the actual shopping, internet users in Serbia rely first on the search engines (61%), then the internet presentation of the brand (34%) and finally on the online shopping sites (25%). As many as 56% of people stated that the first time they had heard of a product or service was on the internet. The mentioned percentage comprises previous experiences (47%), other users – in direct online contact (20%), independent search (13%) and other ways of increasing awareness (10%). Another rather interesting study conducted in the first three months of 2017 showed the increased percentage of e-commerce in our country. The Serbs spent almost billion dinars on online shopping.<sup>[15]</sup>

The trend of purchase of products in online shops has become increasingly present. The National Bank of Serbia expects this trend to continue and that it will contribute to development of new solutions regarding the payment services.

According to the data provided by the Statistical Office of the Republic of Serbia, average value of transactions for online purchase of a product was about 5000 dinars in the last three months of this year. The value of 65.2% of products bought online was up to 5000 dinars, almost 20% of online shopping was up to 10000 dinars,

and 9% of online shopping was up to 50000 dinars. Commonly bought products are clothes and sport products, equipment for computers, electronic equipment, household products, books, holiday accommodation and tickets for cultural events. If we consider e-commerce globally, its main characteristic is unevenness. Almost three quarters of electronic cash is earned by American companies, but the companies from Europe, Japan and Asia will quickly keep this pace.

E-business is a new way of doing business around the world which is based on the access to the internet as a medium which offers the most efficient and economical relationship between the buyers, suppliers and partners. It is accompanied by the exchange of standardized messages and use of electronic signatures which purpose is safe business. E-business arouses interest because it enables market expansion, greater distribution, less costs, and more productive and comfortable work.<sup>[16]</sup>

## 2.2 Advantages and disadvantages of e-commerce

Maybe one of the most important advantages of e-commerce is the fact that one has the possibility to buy a product from any part of the world, and comparison of prices from different shops has now become possible. If a buyer does not like certain product he/she can search for it in another online shop where reviews of other users are immediately available.

E-commerce is not limited geographically or nationally, but by the network and its coverage of a certain territory. As the most important networks are globally defined, e-commerce enables the smallest business entity to achieve global position and do business all over the world. Definite advantage for a buyer lies in the opportunity to have global choice, that is, the possibility to choose the product or service regardless of the geographic location of the supply.<sup>[17]</sup> On the other hand, e-commerce enables the suppliers to become more competitive by giving them a closer relationship with the buyer. A great number of companies use e-commerce to increase the quality of pre- and after-sale customer services by offering detailed information about the product or service offered.<sup>[18]</sup>

Before and after-sale customer services are very important segments in this type of business because they ensure buyer's trust in the company which cannot be gained in direct purchase. If the company provides the buyer with pre-sale information (user manual and product maintenance), as well as the after-sale information (possibility of complaints), the buyer gets the impression that the company really cares about him/her.

With the help of online interaction, sellers can get closer to their customers through personalized products and services. Companies are able to collect detailed information about the needs of each individual customer and automatically adjust their products or services to satisfy these needs.<sup>[19]</sup>

This is another very important advantage of e-commerce because the customer is again given the feeling that the seller really cares about him/her and wants to fully satisfy his requirements, which is almost impossible to achieve in direct purchasing.

Electronic commerce often allows a drastic reduction in the supply chain, thus enabling a faster response to customer requests. There are many examples of direct delivery of goods, and the most explicit example is goods or services that can be electronically delivered. In these situations, virtually all supply chains completely disappear. The appropriate benefit for the customer is reflected in the ability to obtain the required product in a very short period of time, without considering whether the local suppliers have this product in stock or not. [18]

The most significant contribution of e-commerce for both seller and consumer is reflected in the reduction of transaction costs. While for a business transaction one has to allocate few euros, when he/she carries out a similar transaction electronically, it amounts few cents. [19]

Every regularly conducted business transaction can potentially save a large amount of money to the buyer if it is done online. In addition to adjusting the market to the existing products and services, electronic commerce offers opportunities for launching new products and services on the market. Examples of this type of business are all types of information services - technical support systems, information centers and alike. [20] In this segment, electronic commerce offers cost savings when new products or services are put on the market as well as direct tracking of customers' reviews.

From the seller's point of view, the advantages are as follows: [21]

- lower current business expenses,
- reduced costs of sale and delivery of products and services,
- reduced time between placement and charging for the goods and better working capital,
- elimination of the warehouse,
- possibility of more rapid response to the customer's requests,
- less documentation,
- faster identification of the target market,
- better seller's competitiveness,
- reduced turnover rate,
- purchase affirmation – just in time,
- a seller is globally oriented which results in internationalization of purchasing activities.

In e-commerce, there are often conflicts in sales channels, primarily because many manufacturers start evading their distributors and get alone into the retail market. This is the reason why it is believed that the internet will end the distribution system which is common today. The need to store products with the

distributor will be replaced with the systems for rapid delivery of goods. Their role in sales channels will be replaced by electronic presentations, product usage demonstrations, and service and customer support will be organized directly by consumers. [22]

From the seller's point of view, the disadvantages are as follows:

- higher price of equipment (hardware and software) necessary for the operation of electronic shops,
- lack of professionals who could manage and work in this type of sales activities.

In consumer's opinion, advantages are: [23]

- armchair shopping,
- faster delivery in comparison to the other forms of non-personal selling activities,
- lower product prices,
- avoiding the pressure from the retail workers,
- wider selection of sellers and products,
- easier access to the information,
- reduction of costs of product supply,
- more rapid response of sellers to the customers' requests,
- possibility of purchasing new products and services,
- facilitated comparison of products and services.

### 3. PHP WEB APPLICATION AS A TOOL FOR THE PROMOTION OF E-COMMERCE

As it is already well known, the PHP is a successor of the PHP/FI product, created by Rasmus Lerdorf in 1994. This web application was originally used for monitoring the visits and this was the reason why it was named Personal Home Page Tools, abbreviated PHP Tools. [20] Over time, it was desirable to have more functions in the existing web application and Rasmus started writing the new PHP Tools that would enable much better model and more effective implementation. The new model was able to support database interaction, creating a framework where users could develop a simple dynamic web application such as a book of impressions. [24] PHP web applications have become increasingly upgraded and today they represent an excellent tool for the company which activities involve electronic commerce because accuracy could be maintained and the best functionality of the company itself could be achieved. [25] Further in the text, we will present an implementation and concrete application of the php web application in the company which primary activity is e-commerce.

It took 7 months of preparation for the final results to be achieved, that is, for the php web application to be implemented in the specific company, which we will discuss about at the end of this paper. Not only did it involve design of the site itself, but the entire process

which led to the final idea that was to be implemented as well. [26]

It was the crucial problem of this company, and the solution was extremely simple - the introduction of the codebook of all items and organization of the warehouse. The process lasted for 10 days. It was necessary to give each item its code, mark each box in which it was located and in the end, mark the warehouse with the code for example 20-75 (items marked with codes from 20 to 75 are in the Room 2). The following problem was reported. All this information was stored in an excel table with data on how many pieces of items were in stock. This problem did not create bigger problems when it comes to the costs of the company. The suggested solution was certainly effective because it enabled saving time to a certain extent, but the problem still existed.

The table was updated every day after working hours. Let us assume that a person used to update the table properly after work, which means that he/she removed from the table all items that were sent that day (the assumption is incorrect because the revision of the stock was done every two weeks and it lasted for about 20 hours which leads us to the conclusion that the table has not been exactly updated every day), however, we were still confronted with the problem mentioned earlier. As soon as the first order was made and the first item was removed, the information in the table for that day was no longer precise because the item was packed and sent to the buyer but not removed from the stock or the table until the end of the working day. It was necessary to find better solution, the stock that would be accurate at all times and which would provide accurate information to every person in the company. The solution was an internal site that would be available for every person in the company. [21]

The web application was not fully formed immediately, it has been upgraded constantly and has not been completed yet because the ideas have been promoted on a daily basis, but it is very important that today it fulfills the criteria and basic functions that do not halt the work of employees. Further in the text, we will present the way the employee's account works.

The basis is STOCK. The great advantage of this system is the fact that the stock was thoroughly updated before entering the stock in the web application and since then, it was no longer necessary to list available items on the inventory. All that needed to be done was to add amendments to the existing model from the central account and enter a new code for the new model imported by the company.



Figure 1. home page of every employee on the account in php web application

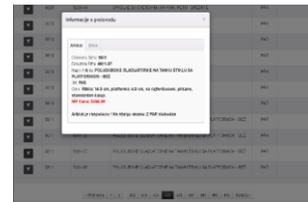


Figure 2. access to the codebook of items in which one can check availability, description and photos of items

By selecting a code card and code, one can see the availability of items at any time, their detailed description and photos, which means that there is always required information about an item.

Furthermore, a description of the improvement in the work process through the web application is presented. The stock was perfect and it still is, and prior to its introduction, employees were not aware how much time it was lost in the company by doing things manually.

However, there was another big problem. Every seller had his/her own independent account. Once the order was made and recorded in his/her account, this order was then sent to the account of the other person who was in charge of packing - the order was given the status of being prepared, then it was sent, charged or returned.

However, the time was saved when it comes to communication; the sellers were able to receive more orders, but the problem occurred in the warehouse. Orders were received by 12 p.m, which meant working for 4 hours, and the employees working in the warehouse packed the parcels from 12 to 4. It is a job in which time cannot be shortened and filling in the address forms, the possibility of incorrect rewriting were still a big problem, as it was earlier.

The next idea was integration with the courier service system.



Figure 3. filling in the information about a customer

The success was connecting all the data about addresses on the territory of the Republic of Serbia which enabled the sellers to handle the situations easily.

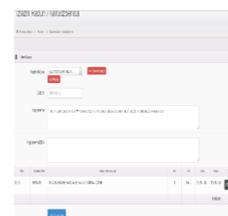


Figure 4. a complete order with selected item

However, this was not the most significant advantage of this integration.

After this step, when the buyer was recorded with the item he/she had ordered, the job of the person in the warehouse was to pack the parcel and write down the assigned number of the order and then, based on that number, the courier service filled in the address form and placed it on the parcel. The time was greatly saved in this way.

Another benefit of this step was creating a personal database of the company's customers and sending notifications through applications that enabled sending messages to phone numbers kept in the data base. The company used this to inform customers about seasonal discounts, which greatly increased the company's turnover at that time.

What is most important for proper functioning of the company is monitoring of the results and performance and the possibility of detecting certain deficiencies in the company so that they can be corrected in the future, and the php application was the one which enabled this to this company.

#### 4. CONCLUSION

Earlier, it was unimaginable to do the shopping in any different way except direct or personal shopping. Nowadays, the use of internet, development of social networks and online shops have been promoted so strongly that forecasts predict that almost every type of shopping will be done through the online distribution channel in the next 5 to 10 years' time. The idea of an online store, with the help of a php application used by employees inside the company could save time in communication within the company and in communication with customers, which increases the accuracy of delivery of the desired customer's item, saves time necessary for checking and maintaining the stock, and in assessing the performance of employees, as well as the supply of goods and services on daily, weekly, monthly and annual bases.

One of the ways of improvement that the company anticipates in the forthcoming period is a similar integration with suppliers, which will shorten the delivery time, i.e. the supply chain, thus obtaining additional benefits in terms of time and money and in this way, this company could become the first company in Serbia that has managed to shorten the chain of supply in online commerce. These are main advantages obtained by creating an internal web application for the company which is very important for good and adequate functioning.

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