

# KEY TRENDS IN THE DEVELOPMENT OF MARKETPLACES AS A TRIGGER FOR THE TRANSFORMATION OF GLOBAL BUSINESS

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**Abstract.** *This research analyses marketplaces in Europe and some other developed countries in order to determine their impact on global trade and business. The paper aimed to answer an important question - how e-commerce could transform modern business taking into account digital changes, a boom of cryptocurrency erasing trade borders and globalization. Sufficient evidence of this transformation is illustrated. A subsidiary objective of this research involves the building of a logical model describing correlation between marketplaces as integral part of e-commerce and global business development. Statistical data were based on variable indicators describing four categories of trading platforms, particularly online stores, price aggregators, marketplaces and classifiers. In addition, global indexes and macro-economic criteria were used in analysis. The methodology of statistical and regression methods was employed for economic-mathematical modelling. This allowed revealing the most important indicators affecting e-commerce and to create reasonable predictions for global business and trade. The research highlights important trends in the development of e-business under the digital economy.*

**Keywords:** *e-commerce, marketplace, global business, Internet trade, business transformation, digital economy, Industry 4.0*

## Introduction

Global business and trade relations are currently undergoing a number of significant changes. Widespread availability and extremely rapid diffusion of information technology induced a major shift in traditional ways of doing business. To be more specific, humanity is entirely involved in the technological era of the fourth industrial revolution, more commonly known as Industry 4.0. This contributes to germinating such progressive types of economic activity as e-

business and e-commerce. Moreover, the possibility of cooperation between economic agents, regardless of distance or geo-location, has been achieved through the global informatisation and widespread use of the Internet. Thus, developed computer and communication infrastructure of the region is becoming the key factor of effective, clear and productive business.

These days, the marketplace is one of the most fast-growing form of e-business because the main advantage of the marketplace model is opportunity to buy everything you need in one place, saving time, which consumers have less and less every day. Eventually, the marketplace mediates between the consumer and those who offer variable products or services to satisfy his/her growing needs. However, we should consider the marketplace in a more complex way because such a trading platform merges international economic agents and become multinational and global. For instance, a consumer and a seller could be both an individual, a company or even an individual country. At the same time all electronic deals should be provided with special informational technology, Internet solution and cyber security. For this reason, the marketplace is rather an integrated than separated element of e-business.

Analysis of the key trends, benefits and risks of marketplaces and e-commerce as a whole is an extremely relevant task because it enables us to determine the ways of increasing the efficiency of local and global business and predict important economic shifts.

Thinking this way, the research study aims to investigate the phenomena of e-commerce popularity and marketplace effectiveness, outline the historical background of e-business growth and highlight the most important trends of business transformation under the digital influence.

### **Literature review**

In recent times, issues of a digital economy become more and more topical among the scientific community.

We have to admit remarkable research by Melin Hanne, devoted to the idea of reformation of EU policy for a digital single market. She proves that digitalisation generates a new type of entrepreneurship, which functions in the digital economy ecosystem. Her analysis was carried out on the basis of the biggest trading platform eBay and shows how small businesses are now able to attract customers around the world using marketplace facilities (Melin, 2015). Thinking this way, this important task leads to assessment of marketplace efficiency (Miller & Niu, 2012).

Many EU reports confirm that E-commerce considerably broadens business horizons and change the market. Firstly, it empowers opportunities for market

participants and contributes to technological acceleration, creating new jobs, infrastructure improvement (Strategic Policy Forum..., 2015).

However, the new opportunities of e-business germinate new responsibilities related to cyber security and customer protection. Recent scientific researches unanimously claim that crucial preconditions for e-business development are consumer trust and data protection (Kalimo & Majcher, 2017). In this case, research by Italian scientist should be mentioned. Paolo Occhiuzzi raised an interesting issue of “depersonalization” of purchases on the Internet market that weakens the purchaser’s position and increases the trader’s information asymmetry (Occhiuzzi, 2016). Thus, data security provides clear terms of transactions and filters the most comprehensible and precise information about the products.

Moreover, other scientists emphasise that modern marketplaces will face with inability to support high standards of Industry 4.0 because of the gap between technological achievements and their application in practice (Cisneros-Cabrera, Ramzan, Sampaio, & Mehandjiev, 2017). The results of that research reveal digital marketplace platforms have not yet moved completely from simple IT approaches. Thus, there is still significant work must be done to incorporate marketplaces into more advanced virtual organizations enabled to form sustainable coalitions.

Despite the economists envisage global business transformation under the e-commerce growth, this subject remains quite difficult for setting clear recommendations and should be thoroughly investigated from different perspectives.

## **Methodology**

Taking into account that marketplaces are intrinsically linked to e-business and e-commerce, we accomplished a complex analysis of the problem based on the empirical method of scientific research. Economic-mathematical modelling was applied for better describing trends, dynamics of criteria and coherences between them. Data collection implied statistical processing of information synthesised from the official open Internet resources such as Eurostat, Statista and World-statistics. We also used elements of deductive and inductive methods, logic approaches, methods of prospective and retrospective analysis in order to arrange analytic conclusions, to create a logical model of business transformation under digitalisation and to highlight key trends of this process. Results of the research methodology will be outlined below.

## **Research results**

Modern e-commerce incorporates the expanding system of trading platforms including online stores, price aggregators, marketplaces and electronic classifiers. All these e-market players directly affect the business transformation at the local and global level. In order to underpin this clue, we should look back in the past to find clear evidence of this transformation process.

Looking retrospectively, the first “prototype” of the e-commerce system appeared in the 1960s in the United States and was used primarily by the transport companies in order to book tickets and for informational exchange among transport services throughout the country. For the first time in the history, American Airlines together with IBM successfully integrated an automatic flight reservation system and this SABRE (Semi-Automatic Business Research Environment) changed the global market of flights and world transport business.

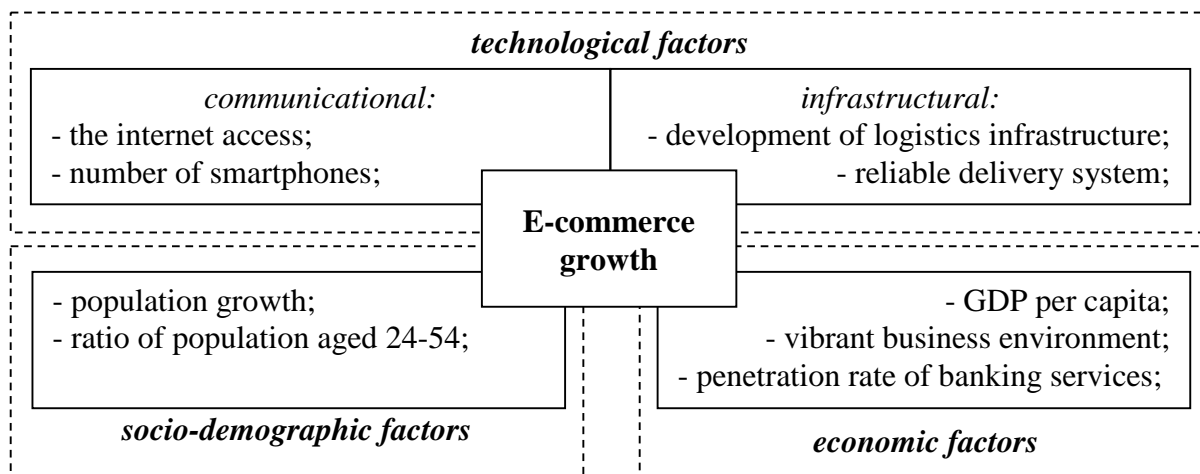
The next stage of business transformation alludes to the “Internet boom” in the 1990s. In that regard, the world had been swept by a wave of new virtual fitches that allowed users to order goods and services on the Internet. However, the most significant evidence of a business transformation is linked to the emerging of online stores. Basically, such stores were ancestors of the modern trading platforms, particularly marketplaces. Furthermore, they provoked considerable decrease in production costs, and that was quite essential for small and medium sized business. On the other hand, online trade scaled the market and made it more flexible and competitive under the digitalization.

It should be noted, that the idea of a marketplace was widely presented in the 2000s after release of the book by Chris Anderson “The Long Tail: Why the Future of Business is Selling Less of More” (Anderson, 2008). The book reveals the most important condition of sales growth, which means a wide range of products on the shelf, even if this shelf is somewhere on the Internet. Thus, the more products of various categories are offered by the store, the greater the chance that consumer will buy something.

These days, e-commerce is considered primarily as commercial cooperation between market participants, aimed to sale and purchase goods or services (both material and informational) using the Internet. However, e-commerce is also a core of the digital economy and Industry 4.0, which widely includes Electronic Data Interchange (EDI), Electronic Funds Transfer (EFT), e-trade, e-cash, e-marketing, e-banking, e-insurance etc. Moreover, such electronic activities relate to all modern levels of economic transactions: business-to-business (B2B), business-to-consumer (B2C), consumer-to-consumer (C2C), business-to-government (B2G), government-to-consumer (G2C). In addition, we could distinguish one more level of cooperation under the digitalization – machine-to-machine (M2M). This level implies informational exchange between IT services

and provides important electronic operation in e-commerce, particularly at the marketplaces.

We have to admit that the authoritative worldwide organization Ecommerce Foundation envisaged the future development of the e-commerce market and highlighted the following influencing factors, which were chosen based on the results of economic-mathematical modelling.



*Figure 1 Model of factors influencing e-commerce (authors' construction based on the report by Ecommerce Europe, 2018)*

As we can see, e-commerce growth depends on socio-demographic criteria, technological and economic indicators. Thus, dynamics of these criteria will delineate some essential shifts in e-business.

Below, we illustrate the most highlighting evidence of such influence.

According to regressive analyses, the driving force behind e-commerce development is gradual growth of the world population from 5.233 to 5.530 billion people over the last six years, which is about 5.67% per year. Moreover, previous research allowed distinguishing a strong trend in population change that would be relevant for the EU Member States (Mietule, Maksymova, & Holikova, 2018). In particular, the share of the socially active population aged 25-54 at the end of 2018 is 42.8%, which also causes more intensive purchasing through the Internet. It should be noted that the share of world Internet coverage continues to grow, namely in 2015, it was 48.62%, and by the end of 2018 it was almost 60%, but the growth rate of this indicator slowed down and was 6.7% in 2018.

According to the Ecommerce Foundation, in 2018 more than 50% of respondents worldwide bought products online using home computers, 46% - smartphones, and only 3% - tablets (Ecommerce Europe organization, 2018). It is noteworthy that almost a half of customers make purchases using a smartphone because they intend to be more non-location-dependent. These dynamics definitely contributes to the development of online trade.

Another evidence of e-business transformation is associated with the growing popularity of social networks. During 2013-2018, the number of people who used at least one social network increased from 1.59 to 2.62 billion (Fig.2).

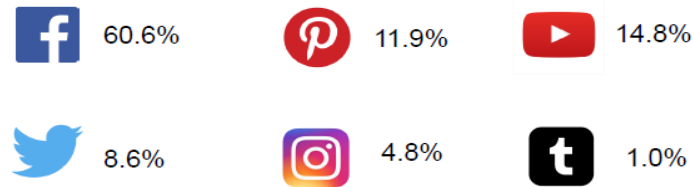


Figure 2 Average share of the world population registered on media platforms in 2018 (We Are Social, 2018)

Taking into account such popularity, there is no doubts that social networks are incredibly effective in marketing and sales management. Eventually, social media change the business environment, improve the competitive situation and even expand the market because small businesses get the chance to enter the e-market and promote their products on the equal basis with major companies. In this case, marketplaces address this idea and represent a wide range of suppliers from small producers to giant manufactures on the common trading platform.

As demonstrated above, GDP is also an important factor influencing the e-business. Table 1 shows GDP per capita by world region.

Table 1 GDP by region in 2018 (Eurostat, 2018)

Region	GDP, trillions \$ USD	GDP per capita, \$ USD
Europe	13.734	29,065
North America	22.004	37,071
South America	3.021	12,746
Asia Pacific	22.994	22,806
Middle East & Africa	1.364	18,038

According to Table 1, the largest amount of GDP in 2018 was generated in Asia Pacific region (22.994 trillion USD), but the highest GDP per capita was obtained in North America – 37.07 thou. USD. Europe remains average with the second largest GDP per capita – 29.07 thou. USD. Since 2010 world GDP has risen from 52.7 to 63.1 trillion USD, and this trend will continue. Thus, correlation between GDP and E-commerce growth could be observed in the following. At the same time, as the growth rate of GDP grew by 1.6% annually, in 2018 Internet sales increased by 23.4%. According to experts' forecast, the market will continue to grow, however the growth rate will gradually decrease in the future (Figure 3).

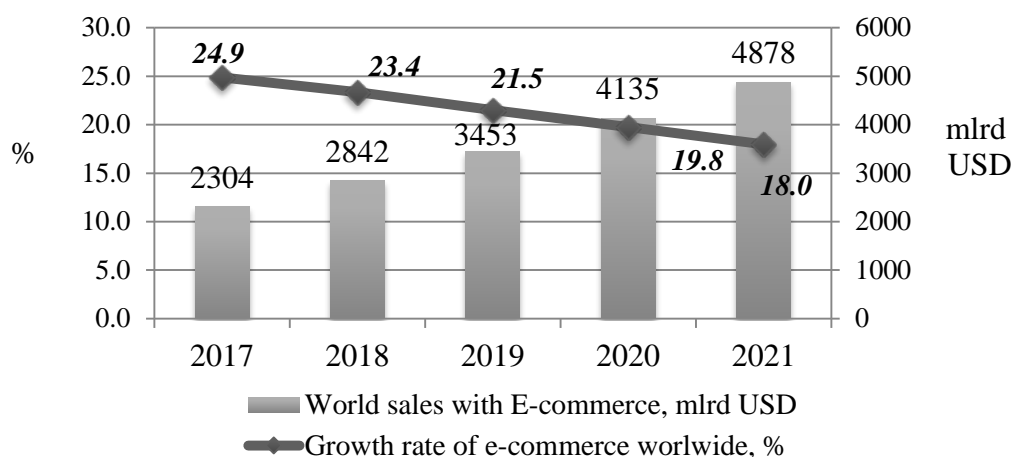


Figure 3 Forecast of Internet sales and e-commerce growth (authors' calculations based on Statista database, 2018)

The diagram depicts a profound increase of Internet sales induced by sustainable development of e-business and Industry 4.0. Such a trend enhances production forces and purchasing power, which encourages new markets and GDP growth.

We have to admit that the rapid development of new markets is a key feature of e-commerce on a global scale. To illustrate this fact, ATKearney's Agency has developed a list of 30 most competitive e-commerce countries, among which China, the USA and Japan were leaders. The top ten most promising markets also included three Western European markets: British, German, and French. Other European countries are represented bellow.

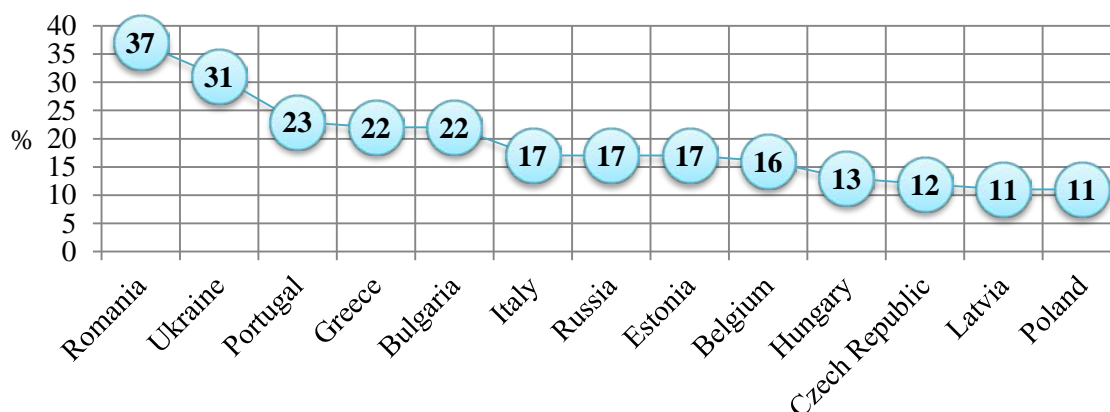


Figure 4 E-commerce growth in 2018 (based on ATKerney, 2017)

The diagram above represents e-commerce growth in some European countries, which are considered as a potential market for e-business. Taking into account that fact, Europe is considered the third largest region in the world; this

year e-trade is expected to accumulate profound profits at USD 363.541 million and increase online sales to USD 481.964 million by 2022 (ATKerney, 2017).

In addition, modern e-business focuses mostly on different trading platforms, particularly marketplaces and online stores. The 18 largest online marketplaces in the world sell goods worth more than USD 1 trillion a year. Analysts predict that by 2020 they will account for 40% of the world's online retail market. Large retailers expand the market by integrating the marketplace model into their digital commerce toolkit.

These days, the following trading platforms are the most popular in Europe.

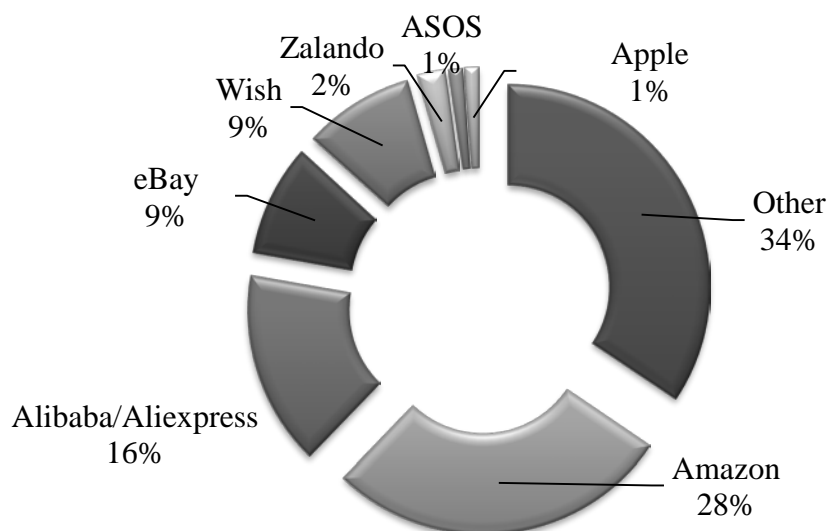


Figure 5 *European trading platform players in 2018* (based on *European Ecommerce Report* by *Ecommerce Europe*, 2018)

The figure illustrates that the major trading platforms in Europe are mostly represented by marketplaces - 64% (Amazon, Alibaba/Aliexpress, eBay, Wish, Zalando), while such popular online stores as Apple and Asos take 2%. Amazon, Alibaba and eBay dominate the European market, according to their website ranking. It is noteworthy that European e-commerce is lead by non-European trading platforms, namely, American (Amazon, eBay) and Asian (Alibaba Group).

This distribution of marketplace shares is mostly relevant for all European countries. However, we will disclose some particularities of e-commerce development by the example of Latvia and Ukraine.

Annual e-commerce growth in Latvia is 11% and Ukraine – 31%, however Internet penetration in Latvia is 82%, compared with 66% in Ukraine. Despite Ukraine's comparatively insignificant experience in e-commerce, online sales are growing considerably. The biggest marketplaces are owned by Ukrainian company EVO Group (Prom.ua, Bigl.ua, Crafta. ua, Kabanchik.ua, Goodini.ua)



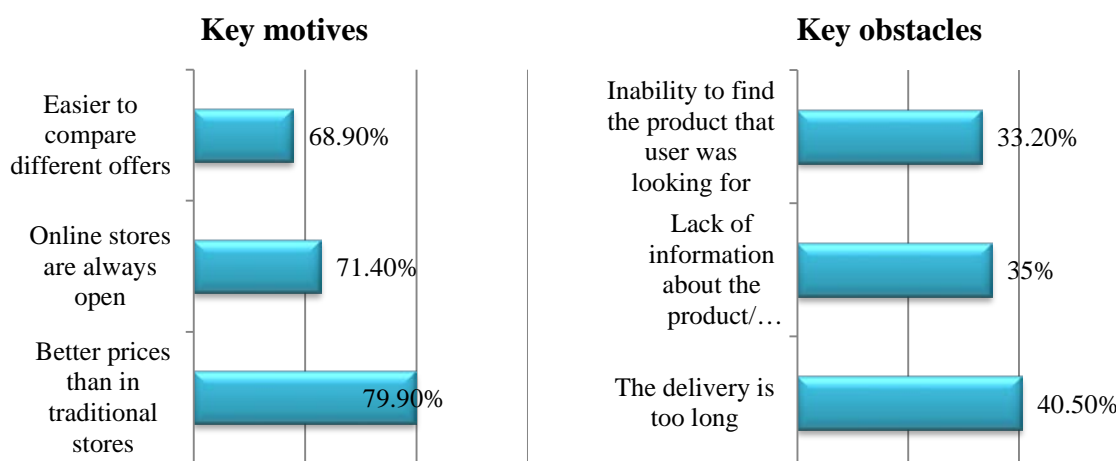
with a turnover of about USD 300 mln. This year number of purchase orders increased by 47%, however the average purchase price grew only by 5%. At the same time, Latvia’s turnover from online sales is about USD 795 mln despite comparatively low e-commerce growth. The country is expected to extend marketplace customers with additional users. The structure of online purchases on the marketplaces is demonstrated in the following table.

*Table 2 Product rankings in the marketplaces in 2018 (authors’ ranking based on E-commerce markets comparison by Gemius consulting company, 2018)*

Rank	Latvia		Ukraine		Rank
1	Public events and entertainment	56%	Clothing and accessories	59%	1
2	Insurance	52%	Consumer electronics (TV set, washing machine, etc.)	57%	2
3	Consumer electronics (TV set, washing machine, etc.)	42%	Mobile phones, tablets and gadgets	57%	3
4	Clothing and accessories	36%	Tickets for transport	54%	4
5	Mobile phones, tablets and gadgets	35%	Computers and related hardware	51%	5

Despite some differences in product rankings, the most popular online deals in both countries related to clothing and accessories, mobile gadgets and consumer electronics. TOP 5 marketplace products also covered public events, entertainment and insurance that was new and not yet popular among Ukrainians.

We also could define factors that encourage and discourage users to purchases on online marketplaces.



*Figure 6 Customers’ motivation and obstacles to purchase on marketplaces (authors’ classification based on Factors investigation by Gemius consulting company, 2018)*

This diagram illustrates that despite the profound benefits of online shopping, it still threatens some part of customers because of highlighted obstacles which should be tackled by marketplaces if they intend to stay competitive in the market. On the other hand, such obstructions of online shopping play into the hands of classic offline markets.

Summing up the above reflections, we are going to model transformational trends which global e-business will probably face in coming years.

**Trend 1.** The growth of ethical and deliberate e-commerce that means environmental friendliness of source materials, products and transparency of prices. This will be possible by increasing an awareness of the environmental and ethical implications of offline and online purchases, real or hidden effects of consumption in general.

**Trend 2.** Regional sales taxes. E-traders will have to pay taxes in each region and for each purchase, regardless of the country where they are physically present. For instance, the American marketplace Amazon will pay additional taxes in all European countries it does the business. On the other hand, this will encourage small online stores to sell products through the major marketplaces to shift fiscal responsibility and avoid exhausting red tape. Thus, marketplaces will expand and even merge.

**Trend 3.** Social Media forms the main informational chain between traders and customers. Eventually, the social network platforms become transactional, so users will be able to make purchases without leaving the platform. Even today, a third of social network users at least once bought products or services directly through the social media application.

**Trend 4.** Investment flaws in e-commerce will rise significantly because business players have to invest in their own digital development in order to save themselves to being driven out from the market. Thus, interest in the Internet of Things, machine-to-machine applications, SMEs model etc. will rise. For example, in the coming years e-business should provide users with a hybrid Progressive Web Application that erases the boundaries between web-sites and mobile applications. Thanks to this, users will be able to serve the Internet stores offline, hence, marketplaces will increase the time spent on the site.

**Trend 5.** Artificial intelligence will be affordable for retailers worldwide. This automates the manual work and simplifies an abundance of complex and time-consuming tasks related to descriptions of goods, copywriting, arranging metadata, revising stock availability, analysis of product matrix etc.

**Trend 6.** Internet stores owned by large retailers will transform into marketplaces. The marketplace model is relevant for a large number of industries, as it is a simple way to expand the product range without increasing costs. World practice shows that the majority of companies that become marketplaces are effective e-commerce players, large retailers, postal and logistics operators,

financial organizations, and also IT companies. Today, 12% of large retailers currently have stores at marketplaces; 32% of major retailers are considering launching a marketplace based on their on-line business.

**Trend 7.** The E-commerce model by the principle “Shopping on the Go” will transform some business approaches. To be more specific, modern search systems provide profuse opportunities for e-business focused on active people, particularly drivers and hard workers who value the time and prefer shopping on the go. Statistical data confirm this clue, hence about 50% of Europeans and Americans use their smartphones to find the nearest gas station or store, order and pay for parking, take away food and coffee-to-go, and 20% of these local searches are being sold (Ecommerce Europe organization, 2018).

**Trend 8.** All services related to internal technical maintenance of e-commerce will be widely requested. Thus, these services will be integrated into a separated cluster – business that serves and maintains e-business (B2eB model).

**Trend 9.** Business will face with content syndication, in other words, with automatic distribution of the same informational content to several sites, social networks and media channels from one centralized point. In this case, it is important to ensure the consistency of content in accordance with the format of platform on which it is being submitted.

## **Conclusions**

This research has led to the following conclusions:

At first, global digitalisation, e-commerce growth and online trade outline the reality of doing business in the XXI century. Thus, developed computer and communication infrastructure of the region and, particularly, Internet penetration are becoming the key factors of effective, clear and productive business.

At second, modern e-commerce players, such as online stores, price aggregators, marketplaces and electronic classifiers affect the business environment and encourage business transformation at the local and global level. E-commerce growth depends on socio-demographic, technological and economic criteria. Thus, dynamics of these criteria will delineate some essential shifts in e-business.

At third, the rapid development of new markets is a key feature of e-commerce on a global scale. European countries are considered by investors as a quite dynamic and forward-looking market for e-business with annual growth more than 30 %.

At fourth, despite the profound benefits of online shopping, it still threatens some part of customers because of obstacles related to the delivery problem, inability to find needed products and distorted informational content. There

problems should be tackled by marketplaces if they intend to stay competitive in the market.

At fifth, the key trends of future business development concern three main areas of transformation under digitalization: ethic and security, technical development and new management approaches.

### **Summary**

Modern business operates in the environment of digital revolution and Industry 4.0, providing market participants with new progressive opportunities of e-commerce. Moreover, these modern prospects contribute to transformation of classical markets into electronic trading platforms such as Internet stores, major marketplaces, price aggregators etc.

Marketplaces change an internal approach to the internet sales and way of doing e-business because they are able to merge an infinite number of product categories, provide convenient conditions for purchase and guarantee high-quality products from international suppliers. In addition, marketplaces address this idea and represent a wide range of suppliers from small producers to giant manufactures on the common trading platform.

We have to admit the profound increase of Internet sales induced by sustainable development of e-business that enhances production forces and purchasing power, scale the markets and encourage GDP growth. The rapid development of new markets becomes a key feature of e-commerce on a global scale. In this case, Europe becomes one of the most attractive markets for e-business development.

Some factors significantly affect e-commerce growth and induce business transformation. To be more specific, we should admit socio-demographic criteria (population growth, particularly the ratio of working-age population), technological criteria (the Internet access, number of smartphones, development of logistics infrastructure; reliable delivery system) and economic indicators (GDP per capita, vibrant business environment, penetration rate of banking services). Another evidence of e-business transformation links to the growing popularity of social networks, where small businesses get the chance to enter the e-market and promote their products on the equal basis with major companies.

Accordingly, e-business will continue to transform, which concerns the following aspects: customer and seller security; environmental friendliness of source materials, products and transparency of prices; syndicated distribution of precise and needed information; wide affordability of IoT, artificial intelligence and modern web applications, provided by e-business services; new management approaches, such as focus on social networks; innovative policy; transformation of local stores into marketplaces.

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