The Opportunities and Challenges of Entrepreneurship in European Digital Economy

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The article presents a comparative analysis of enterprises from EU countries that use the opportunities offered by the digital economy in its activity (enterprise resource planning software, e-invoices, web site, etc.). The article also exposed some business difficulties for the development of electronic markets within the European Union countries: tax, customs and transport difficulties, differences between countries in the legal framework, fragmentation in the industrial sector, difficulties of small businesses, insufficient marketing strategies, differences in culture and language. The article also defined priorities for activity to remove barriers in the development of digital markets.

Keywords: digital economy, electronic market, opportunities, software, advantages, priorities, challenges, difficulties

JEL: M21, O11

The global economy is becoming digital. Information and Communications Technology is the foundation of all modern economic systems. The impact of information and communication technologies on economies of all states is very strong. The economies can seize the opportunities and deal with all the challenges of the changes.

The intensive use of information technologies by businesses leads to increased income and job creation. Studies conducted by the Boston Consulting Group estimate that digitization of products and services will generate annually an extra income of over 110 billion Euros in industry over the next five years [5, p.3].

The digital economy could lead to EU GDP growth by 4% by 2020 [7, p.34] (Figure 1).

The use of information and communications technology enables businesses to easily conquer new markets, lower the sales price and facilitate product distribution. Online businesses can be very profitable, so it is necessary to maintain and develop these businesses.

Firms doing online business have considerable advantages by: [1, p.34]:

- attracting new customers;
- expanding local business markets at national or even global level;
- the emergence of new business opportunities globally;
- improving customer satisfaction;
- acquiring customer loyalty;
- the better understanding of the behavior of the comparators;
- developing products targeted at the specific categories of clients.

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Figure 1. GDP growth generated by the digital economy in the EU

Source: *The Economic Impact of the European Digital Single Market*. [online]. Available at: <u>https://www.copenhageneconomics.com/</u>

The largest share of businesses in EU countries doing online sales is in Sweden - 27%, Denmark - 26%, the Czech Republic - 25%, and the smallest share is in Romania - 5%, Bulgaria - 4%, Italy-4% (Figure 2).



Figure 2. Share of EU businesses doing online sales Source: *Digital Single Market* [online]. Available at: https://ec.europa.eu/digital-single-market

The number of large-scale enterprises doing online business is around 30% of all enterprises, while the share of small enterprises accounts for about 10% (Figure 3).



Figure 3. Share of small and medium-sized enterprises and of large-scale enterprises that do online sales

Source: Digital Single Market [online]. Available at: https//ec.europa.eu/digital-single-market

For small and medium-sized enterprises online sales are an opportunity to expand their activities beyond national borders, however they involve more challenges such as higher costs due to differences in tax system and contract law, higher duties for cross-border delivery, restrictions by the suppliers on cross-border transactions.

There are several indicators that reflect the extent to which businesses use in their activities the opportunities offered by the digital economy. These include: using the Enterprise Resource Planning software, using the Customer Relationship Management software, sharing electronic information on the supply chain, sending e-invoices, having a web site or homepage, using mobile Internet to run business software applications, paying to advertise on the Internet, the level of Digital Intensity etc.

A lot of enterprises share information between different functional areas (e.g. accounting, planning, production, marketing) with Enterprise Resource Planning software package (ERP). The results of using of ERP by the enterprises in different countries are presented in Figure 4. It refers to all manufacturing and service sectors, excluding the financial sector.



Figure 4. Enterprises that share internally electronic information with an ERP, the year 2015

Source: http://digital-agenda-data.eu/

Figure 4 shows that the most of enterprises that use the Enterprise Resource Planning software package are in Germany -56.5%, followed by Belgium-50%, Denmark-46.5%, the Netherlands-44.8%. In some countries, a small number of enterprises use the Enterprise resource planning software package, for example in the UK - 16.7%, in Hungary 16% and in Latvia 15.9%.

Another indicator is the share of enterprises that use the Customer Relationship Management (CRM) software. Customer Relationship Management refers to the use of any software application used to analyze information about clients for marketing purposes. Figure 5 shows data on the share of enterprises from different states that use Customer Relationship Management software. It refers to all manufacturing and service sectors, excluding the financial sector.

Figure 5 shows that the most of enterprises that use the Customer Relationship Management software are in the Netherlands-29,6%, Finland-28,1%, Ireland- 27,4%. In some countries, a small number of enterprises use the Customer Relationship Management software, for example in Latvia -13,6%, Bulgaria-13,3% and Hungary -9,18%.



Figure 5. Enterprises using Customer Relationship Management software, the year 2015 Source: http://digital-agenda-data.eu/

Another indicator is the share of enterprises sharing electronic information on the supply chain. The indicator refers to sending/receiving all types of information on the supply chain (e.g. inventory levels, production plans, forecasts, progress of delivery) via computer networks or via websites, but excluding manually typed e-mail messages. It refers to all manufacturing and service sectors, excluding the financial sector.



Figure 6. Enterprises sharing electronic information on the supply chain, the year 2015 Source: http://digital-agenda-data.eu/

Figure 6 shows that the most of enterprises that use the electronic information on the supply chain are in Denmark-29,9%, Belgium-24,3%, Lithuania-23,7%. There is a small share of enterprises that use the electronic information on the supply chain in Romania-9,77%, Hungary-9,38% and Latvia-7,93%.

One of the indicators is the share of enterprises that send e-invoices. The indicator refers to sending invoices in an agreed standard format (as EDIFACT, XML, etc.) which allows their automatic processing, without the individual message being manually typed. It refers to all manufacturing and service sectors, excluding the financial sector.



Figure 7. Enterprises sending e-invoices, the year 2016 Source: http://digital-agenda-data.eu/

Figure 7 shows that the most of enterprises that send e-invoices are in Finland 71,8 %, Denmark-64,0 %, Slovenia-56,7%. There is a small share of enterprises that send e-invoices in Romania-8,66%, Hungary-8,06%, Cyprus-6,02%, UK-5,16%, Greece-2,74%.

Another indicator is the share of enterprises which have a web site or homepage. The data are shown in Figure 8.



Figure 8. Enterprises that have a web site or homepage, 2016 Source: http://digital-agenda-data.eu/

Figure 8 shows that the most of enterprises that have a web site or homepage are in Finland-95,3%, Denmark-93,3%, Sweden-89,7%. In countries like Latvia, Bulgaria, Romania this indicator is respectively-63,5%, 50,7%,42,4%.

An important indicator is the using of mobile Internet to run business software applications. The data are shown in Figure 9.

The most of enterprises that use the mobile Internet to run business software applications are in Denmark-55,4%, Norway-51,8%, Finland-51,7%. There is a small share of enterprises that use mobile Internet to run business software applications in Hungary-18,5%, Romania -15,4 %, Bulgaria-13,6%.



Figure 9. Enterprises using mobile Internet to run business applications, the year 2016 Source: http://digital-agenda-data.eu/

There are a lot of enterprises that pay to advertise on the Internet. The data are shown in Figure 10. An important indicator is the levels of Digital Intensity. The Digital Intensity score is based on counting how many out of 12 technologies are used by each enterprise. High levels are attributed to the enterprises using at least 7 of the listed digital technologies.



Figure 10. Enterprises paying to advertise on the Internet, the year 2016 Source: http://digital-agenda-data.eu/

The most of enterprises that pay to advertise on the Internet are in Malta-45,7%, Sweden-41,7%, Denmark-39,9%. In some countries, a small number of enterprises pay to advertise on the Internet, for example in Italy-17,8%, Portugal-14,7%, Romania-11,9%.

The 2015 list of technologies includes: usage of internet by a majority of the workers; access to ICT specialist skills; fixed broadband speed > 30 Mbps; mobile devices used by more than 20% of employed persons; has a website; has some sophisticated functions on the website; presence on social media; does e-sales for at least 1% of turnover; exploit the B2C opportunities of web sales; use an ERP software; use a CRM software; share electronically supply chain management information. In 2016 the last 3 indicators have been replaced with: pay to advertise on the internet; purchase cloud computing advanced services; send e-invoices.

Figure 11 shows the data of enterprises with high levels of Digital Intensity. There is a high level of Digital Intensity in the following countries: Denmark-53,7%, Finland-48,3%, Norway-44,3%. In some countries, a small number of enterprises have a high level of Digital Intensity, for example in Latvia-11,4%, Romania-8,4%, Bulgaria-7,88%.

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Figure 11. Enterprises with High levels of Digital Intensity, the year 2016 Source: http://digital-agenda-data.eu/

Decision makers in different countries recognize the important role of digital technologies in the economy and are working to stimulate digital entrepreneurship. Despite these efforts there are still many barriers and challenges that can stand in the way of businesses in the digital age. Understanding and anticipating these barriers and challenges is important in establishing the digital entrepreneurship policy.

The development of digital entrepreneurship is hindered by some tax, customs, transport and legal difficulties, fragmentation in the industry, small business peculiarities, insufficient marketing strategies, cultural differences, language, and commercial practice.

Difficulties in taxation, customs and transport. As a rule, profits were taxed in the country where the activities were physically carried out, which coincided with the customer's residence. With the switch to online trade, new approaches are needed to avoid tax gaps. In 2015, in the EU countries, the Single VAT Online Business Service was launched, offering a simple tool to be used by businesses and guaranteeing the payment of VAT at the customer's place of residence. The EU countries actively contribute to the work of the OECD on the erosion of the taxable base, the transfer of profits and the development of solutions for the digital economy. The European Commission has developed an Action Plan against fraud and tax evasion, which includes initiatives for the digital economy. These are the common corporate tax base and the directives on profit tax.

Another obstacle in e-commerce is that of the global distribution of goods and services and namely the difficulty of delivering, dispatching smaller consignments. There are difficulties in international transport due to the fragmentation of logistics between countries.

Legal framework. Differences between countries within the legal framework constitute another barrier to e-commerce. There are already significant achievements in adapting the legal framework to the reality of e-commerce. However, the laws are targeted at a single country and cannot be applied in many countries. Often the difficulties in global e-commerce are created by the differences in regulatory systems in commercial activity. The EU e-Europe initiative aims to raise to the global level the national and regional frameworks, to match the litigation and disputes arbitration, which will help to speed up the goods and service flows between countries with relatively low costs.

Fragmented industry. Another barrier to the creation of global electronic markets is fragmentation in the industrial sector. In countries where industry is divided into many small businesses it can be difficult to reach the scale economy necessary for creating a global electronic marketplace. The best solution is to set up business networks where a viable system between large-scale and small businesses is created.

Peculiarities of small enterprises. Small businesses face some difficulties in the global electronic markets. Firstly, they refer to the relatively low amount of capital and human resources, the lack of visibility of the manufacturing marks. In the case of small and medium-sized enterprises,

it is necessary to use strategies such as strategic partnerships, arranging market segmentation like franchising, focusing on some market niches, cooperating with other small firms to promote exports. As individual participants in e-markets small businesses may face big difficulties because at the initial stages of such e-markets there will increase price transparency rather than transparency of product characteristics in general - quality, term of delivery, service level.

Insufficient marketing strategies. Companies that want to participate in global e-commerce have to overcome obstacles in their business environments and solve their main internal problems. It is necessary to use certain marketing strategies oriented towards a global market of the product with a multiple linguistic support. The biggest obstacles are of an operational nature, such as the organization of global delivery. Online sales require solution to the problems with dispatch, tax and customs differences.

Difference in culture and language. The difference in culture and language continues to be a significant obstacle to the globalization of electronic markets. This refers to both business culture and commercial activity. The development of e-commerce highlights other market issues such as:

- changes in the structure of global industries;
- the impact of e-commerce on global competitiveness;
- the role of governments in supporting and regulating e-commerce;
- global business models in e-commerce;
- types of global electronic markets.

In order to encourage entrepreneurs who sell online, the European Commission has defined five priorities to remove barriers to the development of digital services [5, p.2]:

- developing a legal framework to facilitate cross-border offers of online products and services;
- combating abuses and settling litigations in a more efficient way;
- ensuring reliable and efficient payment and delivery systems;
- strengthening operators' information and consumer protection;
- implementing high-speed networks and advanced technological solutions.

The efficient operation of a single digital market requires electronic payments. The cost, ease and safety of making an online payment are key factors in making a decision on doing online shopping. Payment by electronic means helps to prevent fraud and tax evasion. However, the online payment market in the EU countries is still expensive. According to the estimates of the European Central Bank, the social and private costs of payments made in the EU are equivalent to 1.2% of GDP or 156 billion Euros per year [6, p.6].

So, business digitization has many facets. Digital technologies invade existing businesses and open up new opportunities. The future of business in the EU countries in the digital age will depend both on digital progress and business climate. It is important to launch campaigns on digital entrepreneurship awareness, to promote national points of a single contact to the existing financial instruments, etc. Business development will be heavily influenced by both natural and legal persons' choices when using digital technologies. Accelerating the process of transforming businesses by means of using digital technologies is only possible by removing certain obstacles and by using more tools, levers and opportunities.

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