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THE DEVELOPMENT OF E-COMMERCE IN EUROPE

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ABSTRACT

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<p>E-commerce provides an immediate global marketplace and business transactions, which can occur seamlessly and very quickly from opposite sides of the world. From a regional perspective, the European region has become the world's largest cross-border E-commerce market. This thesis introduced the current situation of the European E-commerce market and the situation of the E-commerce developed countries through a large number of statistical data. By a variety of data comparison, this paper analyzed characteristics of European E-commerce including the European online market, trends-most popular products and services in Europe. At the same time, it put forward the concept of the socialization and specialization of E-commerce information, analyzed and described the development of E-commerce in Europe.</p>		

<p>Key words European e-commerce market The development of e-commerce Online market trends Online payment methods E-commerce barriers</p>
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1 INTRODUCTION

With the development of international e-commerce, human based trade activities will no longer be the product quantity, but the technology and knowledge of ownership. (Lu & Zhu 2005) International E-commerce using electronic information technology to solve problems, create business opportunities and explore the profit space. For the global market, many countries in the world have the characteristics of international trade in the exchange of goods and services. Compared with traditional trade, it makes more convenient, fast, and international E-commerce application has on its advantage that is more fully reflected.

Since 1997, the EU recognized the huge economic potential of e-commerce. (Schniederjans & Cao 2002) More and more companies tried to take e-commerce activities like advertising, customer service and other electronic business activities through network. In order to help European companies to increase market share of e-commerce market, the European Commission also recommended the adoption of legislation to clear the rights and duties about using the internet for business activities (Ecommerce European 2017).

The Internet had already become a huge market potentially capable of covering the population of the whole world and e-commerce is a major driver for online advertising. (Xing 2009) Compared with other countries and regions, the European e-commerce has its uniqueness and complexity. Europe is still the world's most promising cross-border e-commerce area and the most promising to become the fastest growing cross-border e-commerce area. The contribution of online transactions to the economy is gradually increasing, and the contribution of the Internet to the EU GDP is increasing rapidly. The development speed of e-commerce depends on its basic components of information flow, capital flow and the processing level of the real logistics. Therefore, it determines the level of E-commerce. The development of e-commerce in Europe, has experienced the process from low level to high level. (Xing 2009) Moreover, the development of e-commerce contact with banking industry, financial institutions, government agencies, certification bodies, distribution center, participate in the interaction with online banking, online payments, data encryption, the emergence of new electronic technology the signature, as well as the relevant information collection, sharing, innovation and management of various processing methods.

Firstly, through a large number of statistical data, this thesis introduces the current situation of the European e-commerce market and gives some examples about Germany, Britain and France, three European e-commerce developed countries. Then it recommends the European e-commerce through the behavior analysis of European online market and the emergence of various payment methods. Finally, this paper analyzes and summarizes the development trend of e-commerce in Europe from the current barriers of e-commerce in Europe.

2 THE DEVELOPMENT OF E-COMMERCE IN EUROPE

Although the European e-commerce started late, its development has been very rapid. Studying the development of e-commerce in Europe, we can find that the European e-commerce has experienced a process of development from the lower to the higher, and its specific performance is from 1 to 1,1 n, n to n and other forms. (Xing 2009)

2.1 European e-commerce began to take off

With the extensive application of the Internet in 1992, the United States on the development of e-commerce was ushering in a period of prosperity. The European e-commerce got a late start started in 1995 (Brown 2010). Moreover, different from the development process of North America, Western Europe is in the electronic industry chain to B2B form as the main mode of gradually began. At that time, e-commerce was in a low-level state that only had the flow of information processing. The use of the Internet for the transfer of business information is between upstream and downstream business partners (Xing 2009). In other words, a lot of e-commerce activities are carried out under the parallel of Internet and enterprise private network and the information processing of electronic commerce is the information management between enterprises.

2.2 Electronic commerce information management based on EDI

In 1998, according to the American EDI information processing standard, the European Union proposed the European EDI Standard Specification (Zhang 2002). Therefore, the electronic commerce information processing rose to the EDI based electronic commerce information management stage. Because of the unified information standard, it provided the possibility for the information exchange between enterprises. At this time, although e-commerce was still mainly in the industry between the B2B model, from the original upstream and downstream information transfer (1 to 1), the development of 1 to n. An enterprise can be in accordance with the unified EDI specification and multiple business partners in the industry at the same time transactions. Deco-Premier is a typical example of this era in the Western European countries operating a large e-commerce platform in the interior decoration industry. Deco-Premier platform database store a large number of interior decoration materials and furniture product information, and provides a 3D interior design interface. When the design is completed, order automatic

generation used in product design release, distributed to all manufacturers. Because each party follows the EDI unified data interaction specification, ensure the smooth operation of B2B platform across the country (Zhang 2002).

2.3 Information sharing stage based on storage data

In 2002, the European e-commerce development to storage data sharing for the leading stage. The use of electronic commerce to ensure the participation of zero inventory management of enterprises, greatly reduce the circulation cost, also make the industry chain organization change greatly (Zhu 2004). This allows the value of B2B e-commerce to be fully reflected, but also to stimulate the enthusiasm of European companies on the B2B platform. This stage of e-commerce information management is characterized by n to n, which realized the information exchange and data exchange between a plurality of similar enterprises and other types of enterprises. ICare is a medical field with zero inventory as the goal to build up a large B2B platform. (Xing 2009) On the one side, it is the drug buyer composed by hospital pharmacy, private clinic, on the other side, it is drug supplier formed by pharmaceutical companies, pharmaceutical dealers. In order to achieve zero inventory management, drug buyers to provide their own inventory information to the suppliers, the suppliers can be arranged according to the inventory of the stock. The system will eventually develop into a supply side directly to the warehouse in the procurement side, escrow storage, optimize the production and distribution of reasonable planning, the extension of the field of e-commerce, to achieve production, circulation, supply optimization.

2.4 European e-commerce information management standardization

In 2005, actively promoting the EU, including each member state has enacted the relevant electronic commerce including operations, payment, legal documents and other aspects of the contract and guidance outline (Schniederjans & Cao 2002). European e-commerce information management has been a very good legal guarantee and standardization of operations. E-commerce environment has changed dramatically, the customer's trust in online shopping has also been greatly improved, so that the European B2C and C2C achieved considerable development. At this time, the characteristics of e-commerce information is n to 1, and information sharing becomes a feature.

2.5 Socialization of e-commerce information

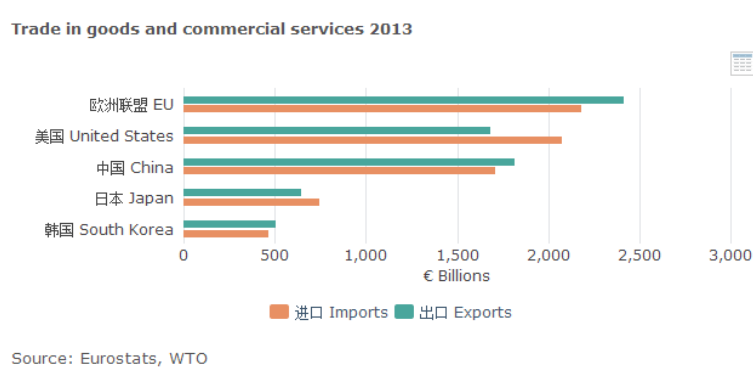
Since 2008, the information collection, sharing and management of e-commerce in Europe has been gradually realized (Schniederjans & Cao 2002). It is characterized by n to n, electronic commerce information processing has become the sharing and management of social data, the individual in the acquisition of information while also contributing to the information, and thus produced the concept of cloud computing and so on.

2.6 Personalized information processing

After 2010, the personalized information processing could be fully reflected. The information will feature 1 to n to n to n..., namely the individual (customers) in many sources is not passive, but to customize the information with a positive attitude (Xing 2009). The information processing process of e-commerce will be the process of personalized data customization.

3 STATUS OF THE EUROPEAN E-COMMERCE MARKET

The EU is in prime position when it comes to global trade. The European Union is one of the most economically developed regions in the world, and the gradual deepening of economic integration has promoted the further prosperity of the region's economy. 2013, the EU's 28 member countries GDP reached 12 trillion euros, per capita gross domestic product was 23100 euros (Eurostat 2017). As the world's largest exporter of goods and services, the European Union is the world's most important economic force. In 2016, 28 countries with an area of 4 million 380 thousand square kilometers and a population of 510 million (Eurostat 2017), and the EU's economic strength has surpassed the United States ranks first in the world. With the enlargement of the EU, the EU's economic strength will be further strengthened.



GRAPH 1. Trade in goods and commercial services 2013 (adapted from Eurostat 2017)

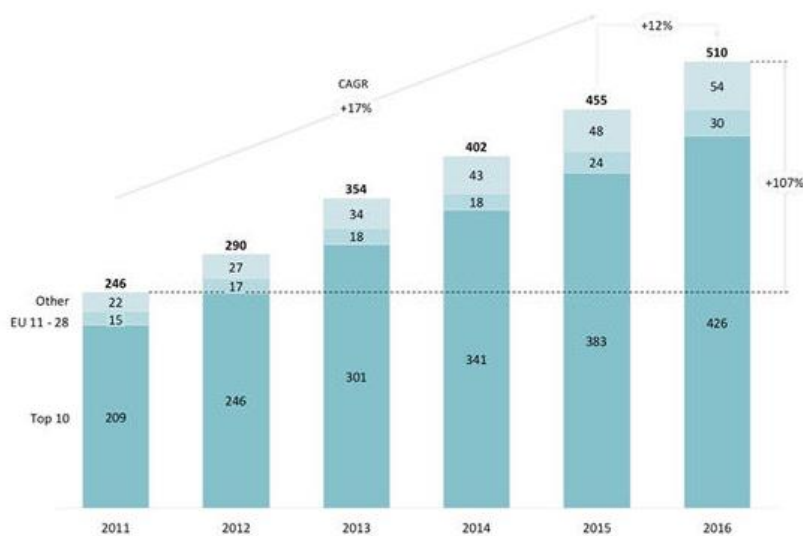
3.1 The European e-commerce market

E-commerce in Europe is expected to generate total sales of goods and services valued at 509.9 billion euros. There are now about 296 million online shoppers in Europe, who spent an average of 1540 euros last year. Only 43 % of people over the age of 15 on the Internet shopping, and more than 16 % of people in another country shopping. In addition, the sales of small and medium enterprises online, less than half of SMEs sell online cross-borders. In other words, the full potential of the European e-commerce market has not yet been reached. 820 million of the European population are Internet users, 259 million online shopping users, e-commerce for Europe contributed about of the GDP. There are 530 million Internet users including 259 million online shopping users in 820 million residents in Europe. It shows that E-commerce contributes about 5 % of GDP to Europe. (Eurostat.2017)

3.2 Current situation of European consumers' online shopping

Throughout the European electricity supplier, the highest permeability of electricity supplier is in the UK. Data show that 81 % of consumers prefer to choose online shopping. Denmark, Germany, France, the online purchase rate are also ranked in the forefront. In southern Europe, Greece, Portugal, Italy and other countries, only 1/3 consumers choose online shopping. (Zhiyan 2016)

European electricity supplier spending is mainly concentrated in tourism and holiday shopping, but they also often buy Hardware Online. Research expected that the European B2C electricity supplier market indirectly created 2.5 million jobs, online shops and businesses are up to 750 thousand. Between 2011 and 2015 (GRAPH 2), the European B2C electricity supplier's revenue CAGR of 17 %, electricity supplier sales grew by more than 200 billion euros.



GRAPH 2. The European B2C market size in 2011 -2016: one billion euros (adapted from Zhiyan 2016)

3.2.1 The e-commerce market in the United Kingdom

The United Kingdom is one of the major countries in Europe. As one of the five permanent members of the United Nations Security Council and one of the founding members of NATO, the United Kingdom

is an influential economic country. UK's economy and currency are independent of the European Union and voted for Brexit in 2016, so UK uses its own currency-pounds and pence.

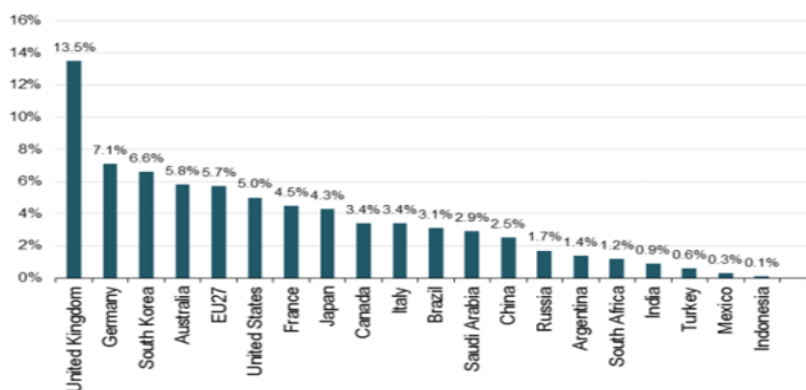
TABLE 1. E-commerce in Europe (adapted from Ecommerce News 2016)

COUNTRY	THE UNITED KINGDOM
Population	63.7 million people
- % internet users	82%
Online sales	€157 billion (2015)
Online stores worth mentioning:	Tesco, Asos, Argos

Compared to the United States, China and Japan, the size of United Kingdom consumer market is small, but its retail sales are very high.

In 2012, the British B2C sales are 3538 dollars per capita, including tourism products, digital downloads and ticketing activities. It is the largest of all countries, more than Germany, the United States and South Korea, while South Koreans is considered the world's highest degree of network active population. (Ecommerce News 2016)

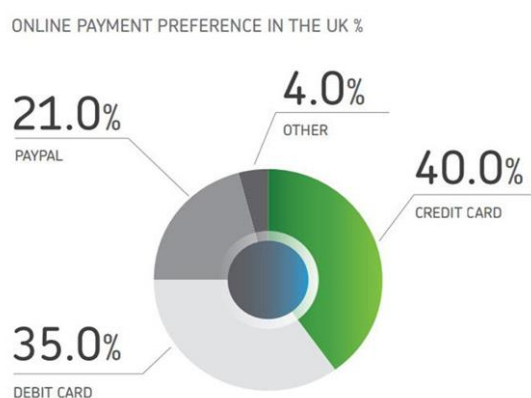
Boston Consulting Group has released a report that, in 2016, the proportion of total retail sales in the UK retail network could rise from 13.5 % in 2010 to \$23 %, the total value of more than two hundred billion euros, which s are quite forward in the G20 countries. (Ecommerce News 2016)



GRAPH 3. Success factors for competitive edge (adapted from Zhiyan 2016)

It shows that 82 % of UK Internet users often shop online, which is the highest proportion of the EU's 28 Member States. And it is also expected to more than 70 % of British consumers have smart phones. In 2016, more than 1/3 of UK online shopping is done through mobile devices. (Zhiyan 2016)

Actually, the most common form of payment for online shopping in the UK is a credit card. Almost 40 % of all online transactions are credit card payments, among them, nearly 1/3 is a debit card, and then one is PayPal. (GRAPH 4) In general, these three can represent a net payment of 96 % about UK payment for online.



GRAPH 4. Online payment methods in the UK (adapted from Ecommerce News 2016)

UK as an English speaking country, and English as the most common language, the United Kingdom has become the primary goal of the Amazon and other major electricity supplier giants.

The British electricity commerce website while attracting many foreign countries to buy things on the Internet especially in other European countries. For example, the most widely used foreign websites in the Nordic countries are from the United Kingdom, and 30 % of the trade between Britain and the EU is online (Ecommerce News 2016).

The distance between the US and the EU is shorter than the UK and the EU when transporting electricity commodities. Britain's general postal service also makes freight cheaper than the US.

The British use credit cards and debit cards more often than any other European countries, and smart-phone usage is the highest in Europe.

The UK's largest online retailer is Amazon, has a 16 % market share, followed by Tesco (9 %) and eBay (8 %). There are also relatively large suppliers, including Asos, Argos, Play.com, Next and John Lewis, etc. In addition to these large enterprises, small and medium electricity providers are also increased. According to data released by the government from 2004 to 2008, the electricity companies of 250 people or less increased by 43 %. (Ecommerce News 2016)

3.2.2 The e-commerce market in Germany

In 2014, the number of online consumers in Germany amounted to 51 million (over the age of Internet users accounted for 94 %), e-commerce consumption potential is the head of Europe. From the global point of view, the number of consumers are also second only to China, Japan and the United States. In 2014, the German B2C multi-channel business (including online and mail order) created a total turnover of 49 billion euros, the electricity supplier which has more than 41 billion euros, accounting for more than 85% of the total. German Internet industry association is also expected that by 2017, 53 % of the German GDP will be related to the electricity commerce (2012 was 37 %), these figures reflect the tremendous growth potential of the German B2C electricity commerce market. (Zhiyan 2016)

From the 2015 global retail electricity supplier index, A.T. Kearney considered that Germany is Europe's second largest Internet market, second only to the UK, but its growth potential is about three times that of the UK.

From 2013 to 2018, European retail sales are expected to grow at an annual rate of 12 % and reach 234 billion euros by 2018. In addition, it is expected that nearly half of the 7 countries in the European retail sales will come from smart phones, tablet PCs and other mobile devices by 2018. (Kronabetter 2016)

From the number of online shopping and electricity supplier turnover, Amazon is the boss of the German online retail industry. Otto, Tchibo, Conrad appliances and other comprehensive electricity suppliers have been occupied the top ten electricity providers for many years. Many online retailers in Germany have been involved in international business, the survey found that 90 % of the members are involved in cross-border electricity supplier business in bevh trade association. (Qian 2016)

European electricity supplier companies in the top 100 in 2014, there are 28 from Germany, and those companies that have not yet carried out international business, nearly half of which are also preparing for the international business.

Major C2C sites : www.ebay.de ;

Major B2C sites : www.amazon.de、www.tchibo.de、www.otto.de ;

Major parity sites : www.preisvergleich.de.

Germany's highly developed logistics infrastructure, so enterprises can carry out business easily. Because the logistics center network is relatively concentrated, the service profit is higher. In 2013, the German logistics industry turnover of 230 billion euros, won the first status about European logistics market, more than the British and France combined multiple turnover. Germany has 3500 express companies and more than 60 thousand logistics service providers, including [deutschepostworldnet](http://www.deutschepostworldnet.de), DHL, Schenker, Dachser and many other small and medium enterprises. Germany also has a comprehensive infrastructure, the integration of the most modern telematics, IT and telecommunication system. (Ecommerce News 2016)

As the capital of high productivity, stable wages, Germany received the favor of investors. In recent years, Germany's labor cost growth is always the lowest in Europe. Since 2004, most of the European countries about labor costs are rising, some countries, especially in some Eastern Europe, rose more than 5 %. But Germany's growth rate of only 1.8 %, is the lowest in the EU economy. Working system of Germany is very flexible. There are regular contracts, 7*24 hour shifts, and other ways to improve Germany's competitiveness as an investment destination, to enable them to actively participate in international business. (Zhiyan 2016)

More than 80 % of the workforce in Germany have academic degrees or received formal education occupation. (Kronabetter 2016) The unique German dual system of education system that in two to three years, the combination of classroom teaching and practice of the post which can very well meet the needs of the industry. The recruitment also has the strong support of government departments. Lots of Big cities in Germany like Berlin, Hamburg, Munich, Cologne, Frankfurt, Ruhr, attracting highly educated young people across Europe, forming a multilingual workforce, making Germany become good base to carry out business to other European countries.

German law on investment, and the establishment of the company is same as Germany and foreign enterprises. The foreign direct investment in the legal framework of Germany take the principle of freedom of trade and payment and do not set limits and barriers on the transfer of money or capital transactions, real estate purchase, profit return, foreign exchange financing etc.

3.2.3 The e-commerce market in France

In the western developed countries, France is the country relatively late development of electronic commerce. But in recent years, e-commerce market continued to be active in France. Although French economic growth was affected due to the global financial crisis and the European debt crisis, electronic commerce had maintained a rapid development trend. In 2013, its sales ranked sixth in the world, third in Europe, slightly behind Germany. Compared with Britain, there was a certain gap. (Ecommerce News 2017)

TABLE 2. E-commerce in France (adapted from Ecommerce News 2017)

COUNTRY	FRANCE
Population	65.1 million people
- % internet users	68%
Online sales	€65 billion (2015)
Online stores worth mentioning:	3 Suisses, Cdiscount, Vente-privee.com

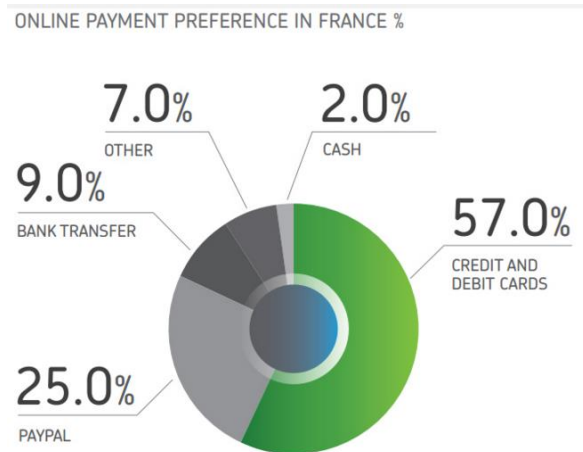
According to the statistics released by Qian, 69 % of the French choose online shopping, including through the electronic commerce website, product catalogue and phone order etc. Among them, the electronic commerce website shoppers, satisfaction reached 97 %. In 2013, France achieved the online trading more than 6 million times, trading volume reached 51.1 billion euros, and a 13 % increase over 2012. As of June 2014, there are 147.2 thousand French online merchants, up 15 % from a year earlier. (Qian 2016) With the Internet products constantly enrich and online shopping population continues to expand, the French e-commerce transaction volume increased significantly.

However, the development of the electronic commerce website of France is not balanced. 67 % e-commerce annual turnover is completed by about 1000 super large e-commerce sites, 4700 sites of the relatively large monthly volume in more than 5000, and 43 % smaller sites per month less than 100.(Qian 2016)

Mobile e-commerce in France has strong growth momentum. Through the intelligent mobile phone and tablet computer mobile client on the mobile Internet (except application download), the fourth quarter of 2013 increased by 93 %. In the past three years, through the mobile phone and tablet computer, turnover has increased by 5.5 times. (Niranjanamurthy & Kavyashree 2013)

It can be said that there are over more than 120 thousand competitive e-commerce sites in France. The biggest online stores is Amazon that has over 15 million unique visitors per month. Except Amazon, Cdiscount, eBay, Fnac and Priceminister are also popular in France. (Zhiyan 2016) It should be noticed that La Redoute and 3 Suisses are the largest French fashion retailers in electronic commerce.

Normally, French consumers love to pay by credit card when they are shopping online (GRAPH 5). They are accustomed to using Carte-Blue for online shopping payment. Carte-Blue is a debit card, but also can be used as a credit card. Other more common methods include MasterCard and American Express, PayPal is also a popular method of payment. (Zhiyan 2016) In France, there are more than 8 million PayPal accounts, making it become third European countries about account numbers for PayPal.



GRAPH 5. Online payment methods in France (adapted from Ecommerce News 2017)

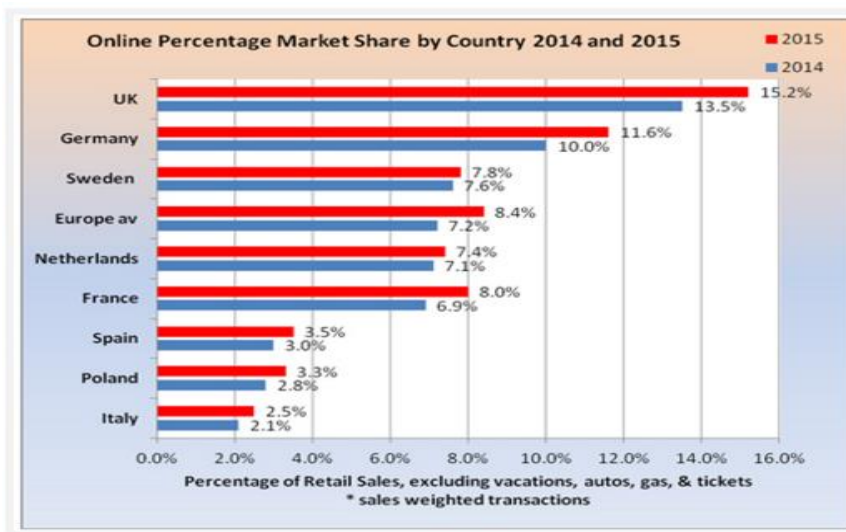
Compared to other European countries, France in the fashion are spending more. France has a special fashion website like La Redoute and 3 Suisses, they are very popular in France. According to research, in the second half of 2015, 44 % French Internet users bought fashion. The second one was the tourism (38 %), cultural products (35 %), beauty / Health (28 %) and consumer electronics (28 %) (Ecommerce News 2017). It shows that fashion is accounted for almost half.

This is also an example shows the French love of fashion. LVMH has a plan to launch its e-commerce website in May called Le Bon Marché. If LVMH has its own website, this is undoubtedly a huge advantage in the price and channel. Through using this strategy, it will compete directly with other famous online platforms and achieve great success in E-commerce. (Ecommerce News 2017)

4 THE EUROPEAN ONLINE MARKET TRENDS

Because of the importance of the network, marketers must use the network to develop more effective strategies when they interact with consumers. With the development of the complexity market in the online, online shoppers would consume more types of marketing information and information sources to make their purchasing decisions which increasingly affect their brand and product selection. Because of customs, market maturity and other differences, different countries have different spending habits. Because of gender, men and women also have different consumer attitudes. So the network is a more powerful resource for consumers when they do research.

4.1 Internet market maturity and growth rate in Europe



GRAPH 6. Online payment market share by country 2014 and 2015 (adapted from Zhiyan 2016)

It could be found from graph, most of the European market shares are relatively low in addition to Britain and Germany. The weighted average share was 7.2 % in 2014 and is expected to increase to 8.4 % in 2015. (GRAPH 6) Countries where the ecommerce industry accounts for a fair share of total retail sales are the UK, Germany and France, not surprisingly the biggest ecommerce countries in Europe. Other countries with high market shares are Sweden and the Netherlands.

In 2006, the European e-commerce market size increased to \$20 billion. The B2B electronic commerce by 2006 increased from 77 billion in 2001 to 2.2 trillion euros, increased from 1 % to 2 % accounted for

the EU trade. E-commerce sales growth in Europe in 2013 from 131.61 billion euros to 156.28 billion euros in 2014, equivalent to 18.4 % of the growth rate. The European e-commerce industry increased to 455 billion euros in 2015. (Ecommerce News 2017)

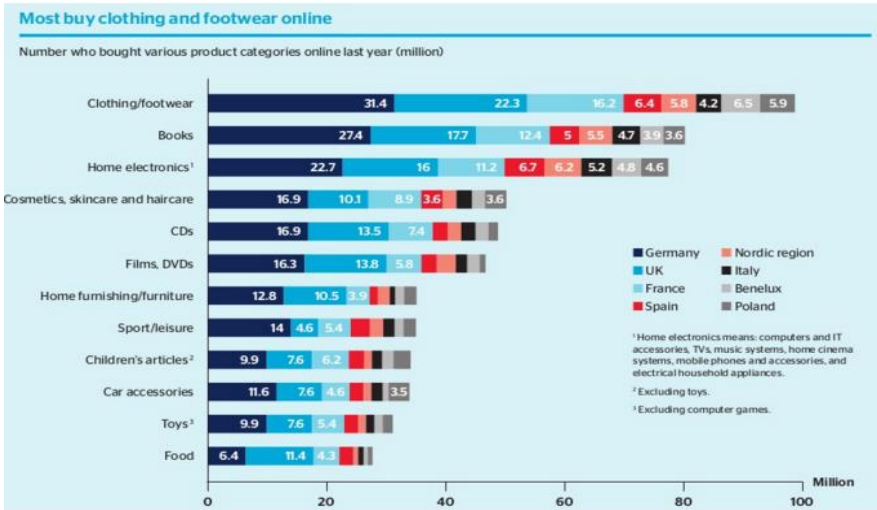
TABLE 3. Market maturity today (adapted from Toporkoff 2008)

High	Medium	Low
Annual Growth Rate of Online Buyers (2007 to 2012):		
Sweden: +3 % The Netherlands: +3 % Norway: +4 % Denmark: +4 % Finland: +4 %	Switzerland: +4 % Germany: +5 % Belgium: +5 % Austria: +6 % UK: +6 %	Luxemburg: +7 % Greece: +8 % France: +8 % Italy: +9 % Ireland: +9 % Portugal: +9 % Spain: +11 %

Although the EU B2B e-commerce from 2007 to 2012 increased, the trade volume of e-commerce accounted for the EU trade also increased. (TABLE 3) The development of electronic commerce in Europe countries is unbalanced. When it comes to market maturity, Sweden, The Netherlands, Denmark, Finland and Norway are having very low annual growth rate which means this countries have high market maturity today. Switzerland, Germany, Belgium, Austria, UK have a medium position. And France, Italy, Greece and some other southern European countries have low market maturity.

Among them, Finland because of the mobile phone penetration, the research and application of mobile communication and e-commerce combined, becoming the world's mobile e-commerce pioneers. (Lu & Zhu 2005) Germany, Britain, France, this three due to their strong national strength, showing a trend of accelerated growth. The sum of online trade in this three countries across the EU could account for 60 % of sales online trading.

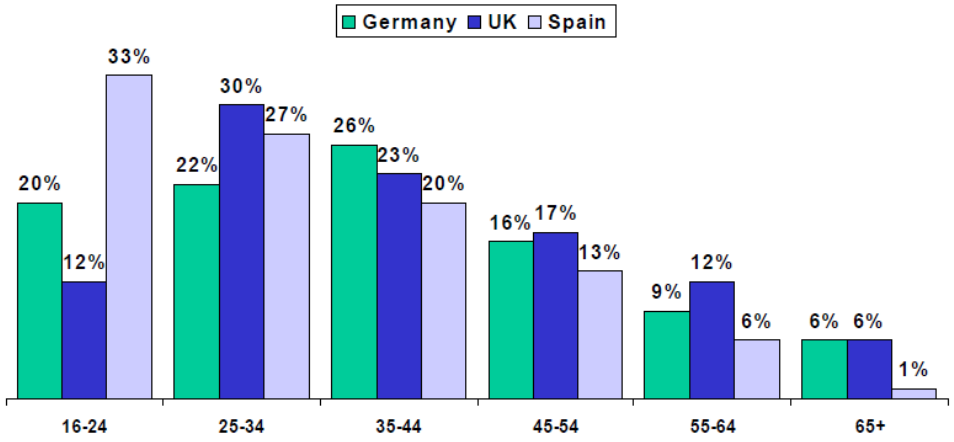
4.2 Online shopping habits



GRAPH 7. Most buy clothing and footwear online (adapted from Ecommerce News 2017)

Through the data of ten countries (GRAPH 7), including the UK, Germany, France, the BeNeLux, the Nordics, Spain, Italy and Poland, it shows clothing and footwear are the most popular products. Books and home electronics are also being loved. It should be attention that the proportion of food in the online shopping is the lowest from the data.

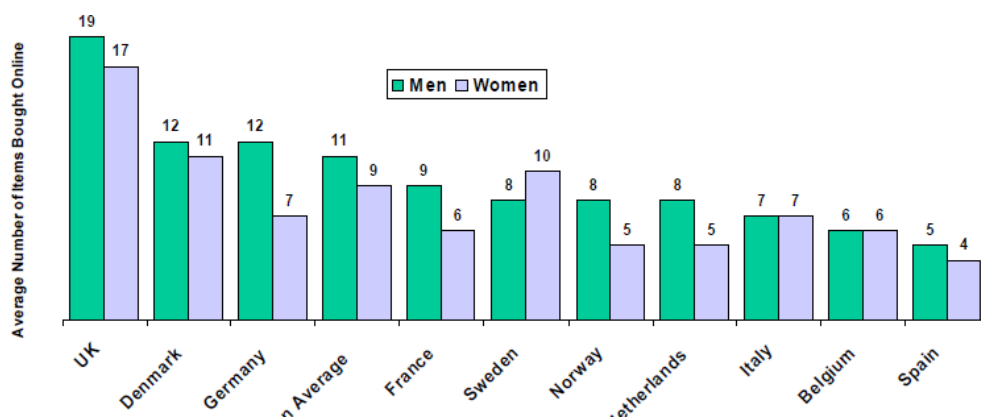
4.2.1 European Online Shoppers – Age Profile



GRAPH 8. European online shoppers (adapted from EIAA 2008)

Germany, UK and Spain as an example (GRAPH 8), 35-44 is the largest number of online shopping area in Germany, accounting for 20 %, then 25-34 (22 %) and 16-24 (20 %). While the largest number of online shopping in UK is 25-34 (30 %), followed by 35-44 (23 %) and 45-54 (17 %). For Spain, 16-24 accounted for 33 % of the proportion in all ages, then 25-34 (27 %) and 35-44 (20 %). In general, the German and UK online shopping age concentrated in the 25-44, and Spain's online shopping age is too young, concentrated in the 16-34.

4.2.2 Online Shopping: Male vs. Female



GRAPH 9. Average number of items bought online by male and female (adapted from EIAA 2008)

The graphic represent the number of articles bought online per year and gender, In general men buy more items than women. UK, Denmark, Germany are far exceed the average level in EU, especially in UK.

Of course, the men and women in the online shopping preferences are not the same. For example, women pay more attention to clothes. About 40 % of women would choose this aspect of online shopping, which form a huge gap with 27 % men. Moreover, in the choice of holiday, 46 % of women and 38 % of men, also formed a contrast. On the other hand, in the electronic products, the men is 39 % with a huge advantage compared to 27 % of women. So in the time of market segmentation, the electricity supplier need to pay particular attention to the preference of women and men. (EIAA 2008)

4.2.3 The European Online Market Trends

The network is powerful, sometimes it can decide some behavior of consumers. About 40 % of European online shoppers said network can change their views on a brand.

Some of online shoppers are more willing to refer to reference famous brands as an important source of important information in web sites. It can be said they are more willing to believe the brand appeal. About 76 % of the customers think is more useful when they consider a product or service on internet. (EIAA 2008)

According to statistics, more than 80 % European Internet users have purchased a product or service online, up 3 % since 2006. Online shoppers buying more one billion of the purchase in just six months' time, spending an average of 747 euros each online. Online shopping sales accounted for an increasing proportion of the total shopping. (EIAA 2008)

Marketers need to provide relevant information at the right time and in the right place online to ensure effective engagement with their consumers whilst they are in the purchase making process.

5 THE APPLICATION OF E-COMMERCE IN EUROPE

Today, customers in control of their shopping experiences are no longer the passive target. Searching engines have become the starting point, exposing the user to a plethora of opinions, reviews, ads and recommendations for alternative products. Businesses are spending vast sums on Google Ad Words and other pay-per-click engines. As increasingly more individuals express their interests on the web readily to their friends and to people with similar interests, a more serendipitous trend of discovering new items through social recommendations has emerged. E-commerce has entered a new era: Social networks and other participatory sites (Blogs, Facebook, and Second Life) are new online gathering places for consumers. Due to their high traffic and intense involvement, these sites are very interesting for advertisers.

5.1 A wide range of online payment methods

European online shoppers continue to use a mix of online and offline payment methods to buy products on the Internet. Strong national preferences remain, making it difficult for European online retailers to offer a single online payment method.

TABLE 4. Different methods paid online in Europe (adapted from Forrester's Online Media 2006)

	"Which payment method(s) do you prefer when you buy products online?"							
	EU-7	UK	France	Germany	Spain	Italy	Netherlands	Sweden
Credit card	40%	60%	35%	26%	51%	51%	19%	34%
Electronic bank transfer	26%	3%	3%	56%	20%	14%	43%	43%
Debit/payment card	24%	43%	57%	3%	14%	10%	14%	17%
PayPal	23%	35%	16%	22%	14%	26%	11%	11%
Cheque/accept giro	19%	5%	17%	31%	2%	19%	37%	13%
Cash	10%	3%	3%	10%	32%	19%	16%	24%

In the UK, the most common online payment is credit card, about 40 % of the online transactions are to pay by credit card. The debit card is also more common means of payment, there are 35 % online transactions with debit card payments. PayPal is ranked third in the UK online payment. This three payments occupy the online payment proportion of 96 %. (Dingfu 2016) So it can be said that other payments are no position in the UK. In Ireland, debit cards and credit cards are same popular. Actually, the local debit card-Laser is the most popular one.

Benelux Economic Union composed of three countries Holland, Belgium, Luxembourg. Although the three countries are in an economic union, their cultural and economic situation are not the same. For example, the Dutch love compared with iDEAL that is a local card in Holland, consumers can directly transfer from the bank account. Since 2005, more than 400 million transactions are completed by iDEAL. The payments of the Belgian online shopping are mainly used in bank cards and online banking, and Luxembourg's online shoppers' preference for credit cards, such as Visa, MasterCard, American Express and JCB. (Dingfu 2016)

Swede in Scandinavian Peninsula are used to pay by credit card when they are shopping online. The use of MasterCard and Visa rate is the highest. Net transfer is also a popular payment, 30 % of online shopping through online bank transfer to complete the online payment. In other countries, the peninsula like Denmark, Norway and Finland, debit card or credit card is the first choice for consumers to pay. In addition, Dankort is a very popular payment in Denmark. It is a local card, not only can be used as a debit card, but also can be used for credit card. (Dingfu 2016)

German preference invoice for online payment. Once the receipt of payment notice sent to the seller, consumers can according to the account and amount to pay the bill. A recent survey showed that 58 % of the Germans choose the first order after the payment. In addition, there are 34 % Germans were accustomed to using credit card, including MasterCard, Visa and American Express. Some other common payment methods are PayPal, ELV, GiroPay, Sofort RatePay and berweisung, cash on delivery. (Ecommerce News 2017)

French people are accustomed to using Carte-Blue for the online shopping payment. Carte-Blue is a debit card, but also can be used as a credit card. The other more common methods are MasterCard and American Express. PayPal is also the popular method of payment. (Ecommerce News 2017)

In Spain, credit card and debit card are major online payments. There is also a popular mode of payment is 4B (a payment jointly launched by the Bank of Spain). Euro6000 debit card and credit card are also common in the country of payment. (Dingfu 2016)

5.2 The form will be in leading by online platforms, community website, 3D network games

With the online sales competition would become increasingly fierce, customers have basically been shared by online platforms (giant, super large e-commerce platform). Small online platforms' threshold is becoming higher, and the initial investment cycle is getting longer. (Xing 2009) The community website, 3D online games are gradually phased in e-commerce elements, making the network sales (e-commerce) not only by the professional shop to achieve.

5.3 Personalized e-commerce features will be fully reflected

With the rapid development of communication WEB2.0, it has brought a lot of changes on the way of electronic commerce. Personalized online consumer is an outstanding example. (Xing 2009) The organic combination of virtual and reality is an important feature. At same time, people have become accustomed to obtain information actively through the network, and publishing information.

5.3.1 The combination of virtual and reality

With the line of "second life" (secondlife.com) and success, it emerged virtual world of the real world. (Xing 2009) And there is no exception the virtual world integrate into the e-commerce element. Not only a large number of ads cleverly displayed in various activities, users in the virtual world in entertainment, communication and learning but also they completed actual consumption, while the consumption process is completely different from the sale of conventional shop.

5.3.2 The combination of customization and creation

Because online personalized demand is more and more strong, leading to the requirement to provide the function of "customization" and "creation" in e-commerce platform. "Customization" is based on their own characteristics to produce special customized goods, such as MVM in the United States. It can provide the freedom of choice in the 3D environment custom to fit the clothes. (Fang 2017) Platform can let users create works, and to share with others on the network, named "creation".

5.3.3 The combination of Individual and group

The behavior of the individual from the previous passively acceptance to active cognition, Even actively participate in the establishment of a product, design and communication. (Kronabetter 2016) Interpersonal communication coverage more widely, the credibility of the information is more and more high. So that e-commerce information spread faster and faster, the efficiency is also growing.

5.4 Mobile commerce would become the leading

The emergence of the m-commerce (Mobile Commerce) to expand the application field of electronic commerce, especially in cultural products. Although the general view of the world, m-commerce is just started, the development prospect is inestimable. (Niranjanamurthy & Kavyashree 2013) And the content of m-commerce is also not just for shopping, it will also become a method of payment, largely replaced by online credit card payment. This is an extension of e-commerce services, and it will also lead the revolution.

6 THE INDUSTRIALIZATION OF E-COMMERCE IN EUROPE

European e-commerce specialization is accompanied by industrialization. With respect to the North America, the higher level of industrialization in Western Europe. Traditional industries have played an important role from the rise of electronic commerce in US. The electronic commerce website top 15 in the United States, there are 6 online sales branches established production enterprises.(Rijk 2015) However, the European leader promoted the development of electronic commerce that based on pure Internet companies. In the top 20, European e-commerce websites have 15 companies belonging to the network. (Ecommerce News 2015) These European pure network companies based on full use of electronic commerce technology company resources, founded the various modes of industrialization degree of high commercial mode.

6.1 French NETEVEN

The French NETEVEN company (FIGURE 1), there is no special own shop, but using the existing e-commerce sites (platform), specializing in the retail industry. They use the NETEVEN engine and sale goods on different platforms at same time. Eliminating the website marketing publicity expenses (responsible for the website) and not managing the commodity procurement procedures (responsible for suppliers). They do not assume distribution and after-sales service (responsible for the logistics company) either, but only focus on the most important segments about extensive product information and receiving orders. (Xing 2009)

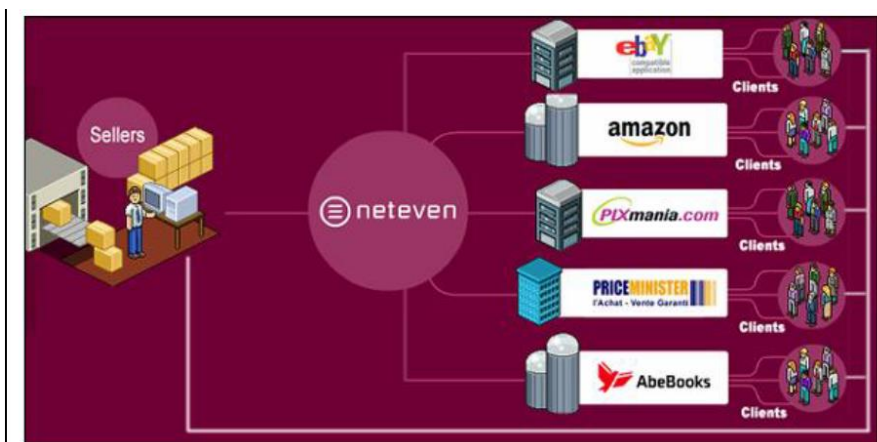


FIGURE 1. The French NETEVEN operating mode (adapted from Ecommerce Europe 2015)

6.2 German EMONS

The German EMONS (FIGURE 2) open up the specialized institutions from the traditional logistics business, to meet the needs of the business e-commerce companies. They also could provide a series of services including cargo warehousing, receiving orders, shipping distribution, receiving refund goods, customer telephone service, collecting customer feedback information etc.(Xing 2009)

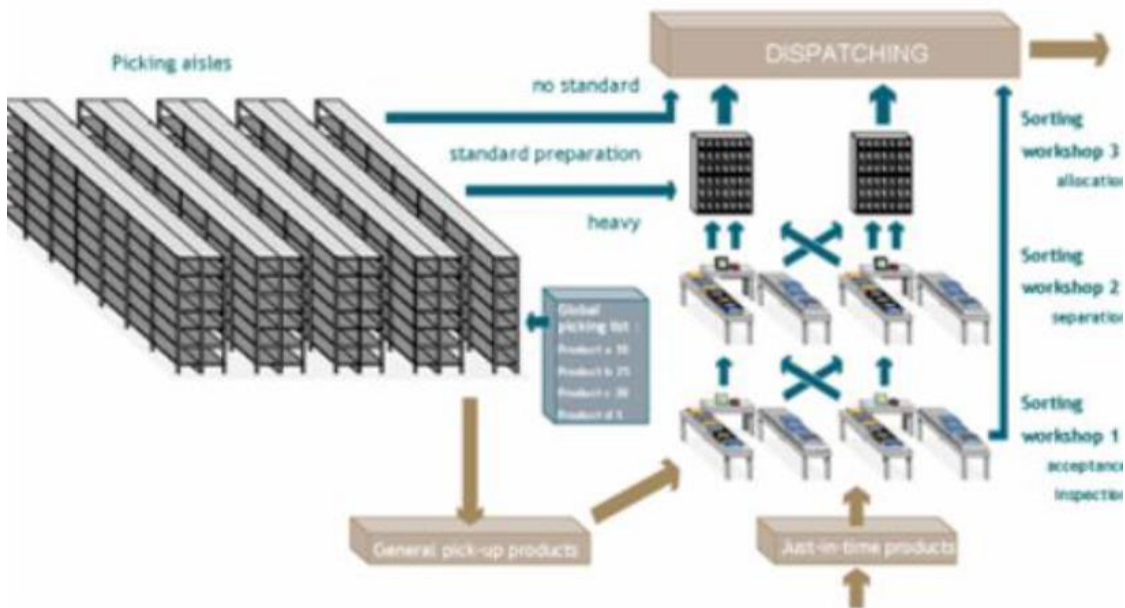


FIGURE 1. The logistics work flow of electronic commerce in Germany EMONS (adapted from EMONS)

7 E-COMMERCE BARRIERS

The introduction of the Euro in 2002 was a step towards improving this barrier. Language and culture also provide significant barriers. Another important barrier is the legal barriers and jurisdiction: The inability to place boundaries on the Internet makes it virtually impossible to regulate the Internet. The transaction could be national or international, and consumers do not know when they are leaving a regulated zone and entering an unregulated area. Another issue in this context is the very different national VAT systems. (Ecommerce News 2017)

7.1 The misuse of data

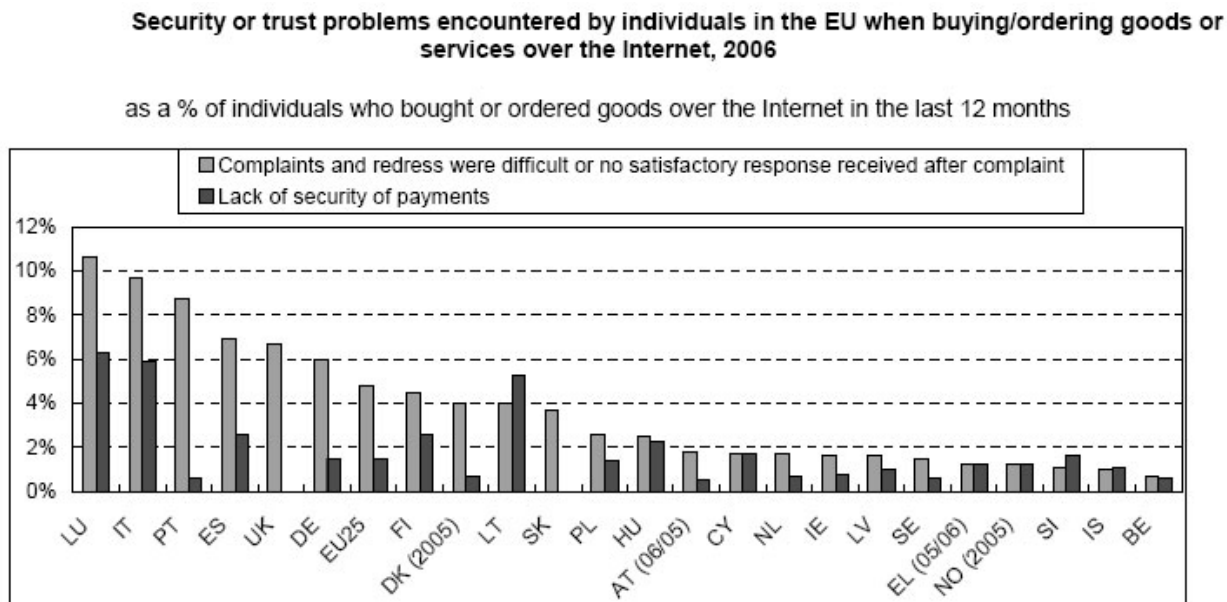
E-commerce requires a large amount of personal data to be collected. Data is often transferred encryption and can therefore be viewed by unauthorized parties. IT enable the rapid, systematic collection, classification and use of data. (Oluwaseun 2013) Automated processes (such as data warehousing and data mining) increase the possibilities for mass data collection and evaluation, but also increase the risk of abuse.

7.2 Security and trust problems

With the rapid development of e-commerce, the security of electronic payment is becoming more and more important. E-commerce security spans a number of areas including privacy, integrity, authentication and non-repudiation. A breach in any of these areas can result in a major problems for an online vendor, a purchaser, or both. (Toporkoff 2008)

We can see (TABLE 5) Luxembourg, Italy and Portugal are the top 3 when it comes to no satisfactory response received after complaint. And customers also think Lithuania, Luxembourg and Italy are not security of payments. Since financial transactions are the backbone of e-commerce, if not the entire purpose of it, any hesitation on the part of the customer when it comes to making online payments could spoil the e-commerce party.

TABLE 5. Security & Trust Problems Encountered When buying over the Internet (adapted from Toporkoff 2008)



7.3 Basic model of electronic commerce

Europe includes most of the world have the three basic elements of e-commerce, information flow, capital flow. (Sun & Zhang 2016) Because the European region is relatively large, the logistics of all parts of the country cannot be unified, will continue to restrict the development of e-commerce.

7.4 E-commerce would become more complex after Brexit

Over half of retailers in the United Kingdom think cross-border trading will become more complex when the country leaves the European Union (Toporkoff 2008).

From the current data, most of the British electricity supplier has not made adjustments to their own online business to deal with Brexit. It is worth pondering after Brexit, the United Kingdom may modify the value-added tax and legal system with other countries. On the other hand, the exchange rate issue is likely to become another barrier of e-commerce.

7.5 Legal frameworks, VAT and logistics

Differing legal frameworks, complicated and expensive taxation systems (VAT) and logistics or distribution issues still represent the top-3 barriers that online companies face when they sell cross-border in Europe, this was also the case in 2015. Differing legal frameworks across the EU is difficult for 59 percent of the companies that sell cross-border or are planning to do so (Ecommerce News 2016). Dealing with 28 different sets of rules for data protection, privacy, consumer and contract law does turn out to be burdensome for online merchants.

Different taxation systems, VAT rates or customs represent a difficult barrier to overcome when going cross-border for 48 % of companies selling abroad, therefore a similar percentage rate compared to Ecommerce Europe's figures for 2015. (Ecommerce News 2016)

Logistics and distribution represent a difficult barrier to tackle for 33 percent of the companies selling abroad. Compared to figures from last year (44 %), the situation has improved, but online merchants indicate many barriers which still remain on quality and transparency of services (Ecommerce News 2016).

8 CONCLUSIONS AND DISCUSSION

The objectives of this thesis was to research on the development of e-commerce in Europe. In the process of development, there is a good side like the rapid development of the economy and a bad side like unbalanced development between countries.

In the process of writing, some problems was met in order to study of a detailed comparison of e-commerce development between several countries such as UK, Germany and France. And another problem was to analyze the composition of e-commerce from a professional point of view.

E-commerce is a really huge system, which not only have technical requirements, as well as human requirements, for example, to enter the markets of different countries to respect each country's traditional customs, and it also have legal requirements.

The European e-commerce got a late start which is really started in 1995 (Brown 2010), but the market potential is huge. With the development of electronic technology, the development of e-commerce is an inevitable trend. Although the European e-commerce applications reached a very high level, there is still a big space for development, especially for small and medium-sized enterprises, and how to carry out the electronic commerce activities of enterprises is the main problems to be solved.

European E-commerce is in the leading position in the world, the construction of network infrastructure due to its online payment, security and public trust, network facilities developed logistics system, and the European Union under the coordination of the legal protection of the environment. Although the whole of Europe has strongly consumption capacity and enormously market potential, different countries have different cultural background and lifestyle. The success of the model in another neighboring countries may not fully implement, which would increase the cost of market development and the difficulty of the scale development. (Lu & Zhu 2005) On the other hand, the complexity of the payment method and payment security problem are worth thinking about how to improve the level of technology to achieve the trust of consumers.

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