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## The Relationship between Globalization and E-Commerce: Turkish Case

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### Abstract

Globalization has been one of the most prominent phenomenon of the 20th century that shaped the world economy dramatically. Globalization process is followed by the decline in administrative barriers to trade, sharp falls in the costs of transportation and communication, fragmentation of production processes and the development in information and communication technology which formed basis for diversification of resources, creation and development of new investment opportunities by opening up additional markets, and accessing new raw materials and resources.

Telecommunications and transport links flourished by the globalization created a new way of accessing to the new markets through e-commerce. However in a broad sense e-commerce concept, affecting employment patterns, productivity and industry structure, is much broader than it's perceived relationship between globalization and e-commerce is nebulous. In this regards this study investigates the relationship between globalization and e-commerce. The evidences presented in the study present that rather than a one way relation a mutual relation is observed. However the level of technology and telecommunications substructure of the country in question vary the direction of the relation.

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### 1. Introduction

The environment formed by the globalization and technological change triggered political, social and cultural change all around the world by the second half of the 20th century. As well as the social and cultural changes the globalization have also created a new global economy which provide opportunities for the firms to access to new markets and participate in global production networks. Beside the opportunities the new economy formed a more competitive environment for the firms in which the winners are the ones that can adopt global telecommunications and transport links.

The adoption the internet makes it cheaper and easier for firms to extend their markets, manage their operations and coordinate value chains across borders. Reduction in the costs of transactions and information, technology has reduced market frictions and provided significant impetus to the process of broadening world markets. ICT adoption fosters

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globalization by reducing the cost of transaction and coordination and creating new and expanded markets with economies of scale (Totonchi and Kakamanshadi, 2011:271).

Regarding globalization and e-commerce together it is clear that globalization process has formed basis for emergence of e-commerce. However in the next step the relationship between globalization and e-commerce is controversial. In this study this relation has been evaluated. Evidences presented in the study shows that the further globalization goes e-commerce diffuse in the less developed parts of the world. On the other hand the diffusion of e-commerce also supports the development of the globalization. In this sense it can be said that rather than an effect of globalization on e-commerce or vice versa mentioning a mutual relation exists. Turkish case also demonstrate that internalization of the economy supports the diffusion of e-commerce however the direction of the relation varies depending on the technological development level of the country in question.

## **2. Globalization of the Economy**

By the second half of 20th century economic globalization is recognized as one the most powerful forces that shaped the modern world. In this period international trade and financial flows have become increasingly significant (Frankel, 2000:2). Globalization is not only characterized by the growth of the international trade of goods and services, but also the political and social linkages that accompany growing economic integration. Outwardly, the driving forces seem to be the decline in administrative barriers to trade, sharp falls in the costs of transportation and communication, fragmentation of production processes and the development in information and communication technology (Gaston and Khalid, 2010: 3).

Globalization process integrated the countries in economy just as the other many fields. As a natural result of the integration liquidity of knowledge, labour, capital and goods fairly increased. This liquidity brought new construction processes together. Parallel to globalization, macroeconomic balances have been reasonably affected due to dynamic movements of foreign capital, in this framework globalization affected economy deeply as well as culture and politics.

The goal of globalization is to provide organizations a superior competitive position with lower operating costs, to gain greater numbers of products, services and consumers. This approach to competition is gained via diversification of resources, the creation and development of new investment opportunities by opening up additional markets, and accessing new raw materials and resources (Investopedia, 2012).

When considered collectively the effects of globalization can be listed as follows (WHO, 2014);

- Economic change; trade liberalization, deregulation, expansion of the global market place
- Political change; redistribution of power from states to interstate bodies and the growth of global civil society
- Social and cultural change
- Technological change; including improved global telecommunications and transport links.

Although the positive and negative effects of globalization on economy is a hot debate, developing countries and SME's are the ones who face these reflections. The participation of developing countries in the globalization process can enable them to better utilize their comparative advantages, introduce advanced technologies, foreign capital and management experience. It is also favorable for eliminating monopolistic behaviors and strengthening market competition. Nevertheless, while providing more development opportunities for developing countries, the globalization process is also posing enormous risks (Shangquan, 2000:4). At firm level globalization process can enable them to access to new markets and participate in global production networks. The innovative and dynamic aspects of globalization include increased market access, increased access to capital, and increased access to technology and information which have led to greater income and employment opportunities. On the other hand some challenges may occur such as foreign competitors entering firms' domestic markets, and domestic competitors' reducing their costs through global sourcing, moving production offshore or gaining economies of scale by expanding into new markets (Totonchi and Manshady, 2012:83).

The advances in telecommunications and transport links created a new way of accessing to the new markets through e-commerce. However in the next step whether e-commerce contributed to globalization or the opposite case is controversial.

## **3. Globalization and E-Commerce**

OECD (2001) defines e-commerce in two scopes sorted as broad and narrow ones. According to the broad definition, e-commerce is the purchase or sale of goods between the businesses, households, individuals, governments and other public and private organizations over computer networks. Narrow definition on the other hand is almost

same as the broad definition of the exception that the instrument of trade is limited with the internet (OECD, 2001).

Globalization and e-commerce are expected to change economic structure of nations. The expected superior economic structure is mainly influenced by the above two factors. In literature the new structure is generally referred as Knowledge Economy, New Economy or E-economy. E-commerce not only reduces communication costs, but also increases flexibility in locating activities. The studies in the subject clearly shows that internet technology has lead to an increase in international trade (Totonchi and Kakamanshadi, 2011:273).

In the course of transition from the old economy to the new one, e-commerce has eliminated the problem of time and space which in return has lowered costs in production process. Thus e-commerce has become a dynamic factor in the new economy. Although electronic communication technologies has been being used since the beginning of 1980s, use of those technologies for trade has become widespread since the second half of the 1990s. Because it's rather new, it has been perceived in several ways by different institutions, organizations and individuals (Savrul and Kılıç, 2011:251).

E-commerce consists of the exchange of data to facilitate the financing and payments. E-commerce is the exchange of goods and services between four broad groups over the Internet. This can happen between businesses and consumers, businesses and businesses, intra-companies, and consumers and consumers. E-commerce encompasses any commercial activity that takes place directly between a business, its partners or its customers through a combination of computing and communications technologies. It takes into account sales, marketing, communications, service, and workflow (Rosen, 2000).

Regarding the globalization issue the arguments provided above raise the question whether globalization support e-commerce or e-commerce accelerate the globalization process. The study of Kraemer et. al (2002) introduce that the internet is used mainly for the information exchange with customers and suppliers and e-commerce has a direct and meaningful effect on globalization. Likewise literature on the issue shows that firms use the internet mainly for purchasing rather than sales. Its major reason is that firms in their foreign purchases face lots of complex processes, also purchasing from foreign countries requires coordination with those suppliers which have a long distance from them, and so electronic purchases via the internet have so many economic advantages for companies.

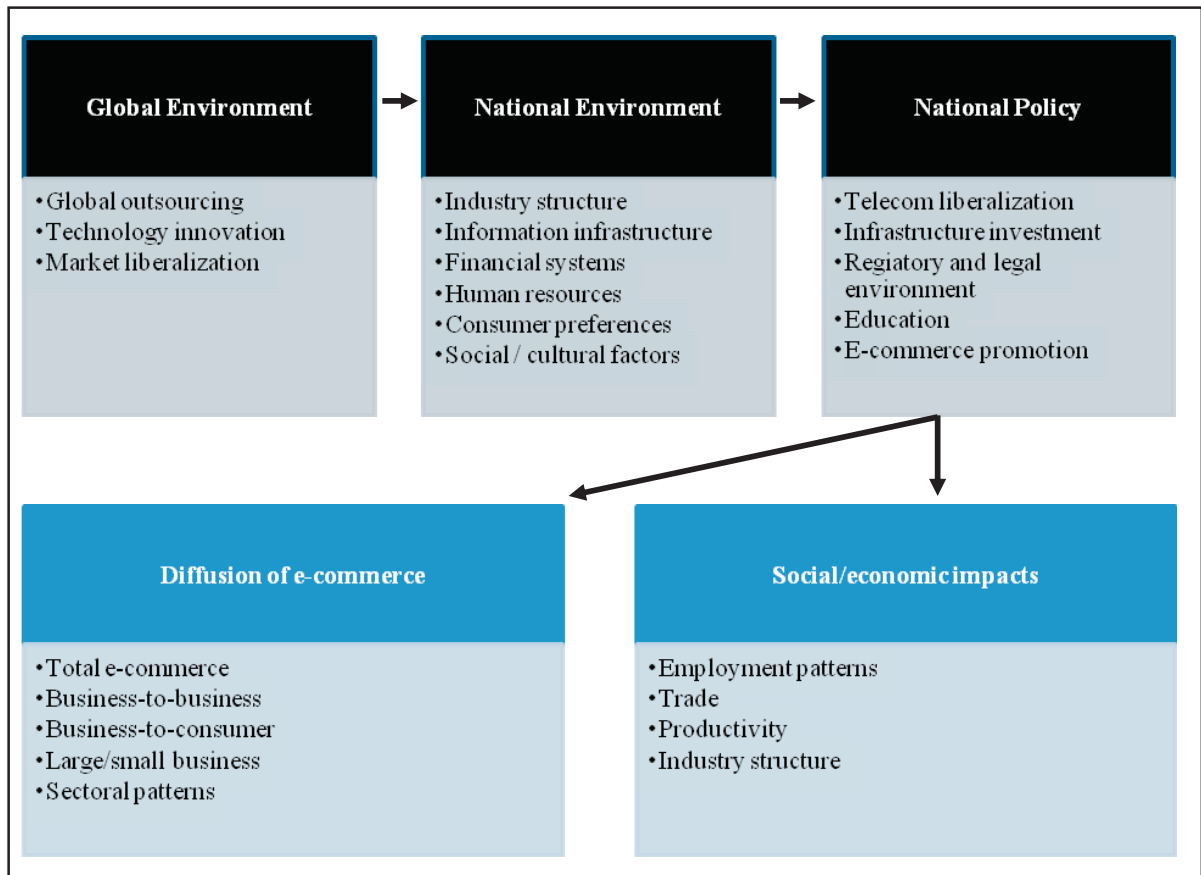


Fig.1. Conceptual Framework. Kenneth L. Kraemer, *Globalization of E-Commerce*, 2014.

E-Commerce benefits globalization through two channels:

- Physical locations, manual processes, or other expediting functions are substituted by e-business practices.
- Coordination costs, which can reduce the costs of working with those foreign subsidiaries still required because of the nature of the product or service or because of regulation or cultural issues are reduced by e-commerce practices.

On the other hand e-commerce diffusion is dramatically affected by the globalization process. Highly global firms are likely to employ e-commerce more intensively due to several reasons (Totonchi and Kakamanshadi, 2011:273);

- Firms facing foreign competition are under greater pressure to adopt technologies such as e-commerce that enable them to protect or expand market share and operate more efficiently.
- Firms doing business outside their own country may be more motivated to lower their transaction costs by using information technology.
- Using the Internet for transactions and coordination can save time and money on delivery of goods by using rich information flows to simplify and streamline the flows of physical goods in the supply chain.
- Firms that buy and sell in international markets are under pressure from trading partners to adopt e-commerce to improve coordination with other members of the value chain. This is especially true in the case of global production networks dominated by multinational corporations that may require partners to adopt e-commerce in order to do business with the multinational corporations.

Consequently because the e-commerce concept is much broader than it's perceived the relationship between globalization and e-commerce is nebulous. Rather than talking about the effect of globalization on e-commerce or vice versa mentioning a mutual relation would be more accurate. Additionally technological substructure of a country fairly affect the direction of the relation. In this context it would be beneficial to compare the global e-commerce trends with the ones in developing countries.

### 3.1. Global Trends

Although the history of online shopping systems goes back to 1979 (Tkacz and Kapczynski, 2009:255). Profitable e-commerce experiences have come to be seen after the first years of 21th century. Since then B2B and B2C practices have been spreading all around the world. Thanks to their technological advantages and robust telecommunications substructure pioneers of e-commerce have been the developed countries such as United States, United Kingdom and Japan however due to technological advantages diffusion constituted by globalization developing countries with dense population are catching up with them. This is also the result of globally operating e-commerce firms besides the enterprises of developing countries. Development of global online retail sales in the last eight years is as follows;

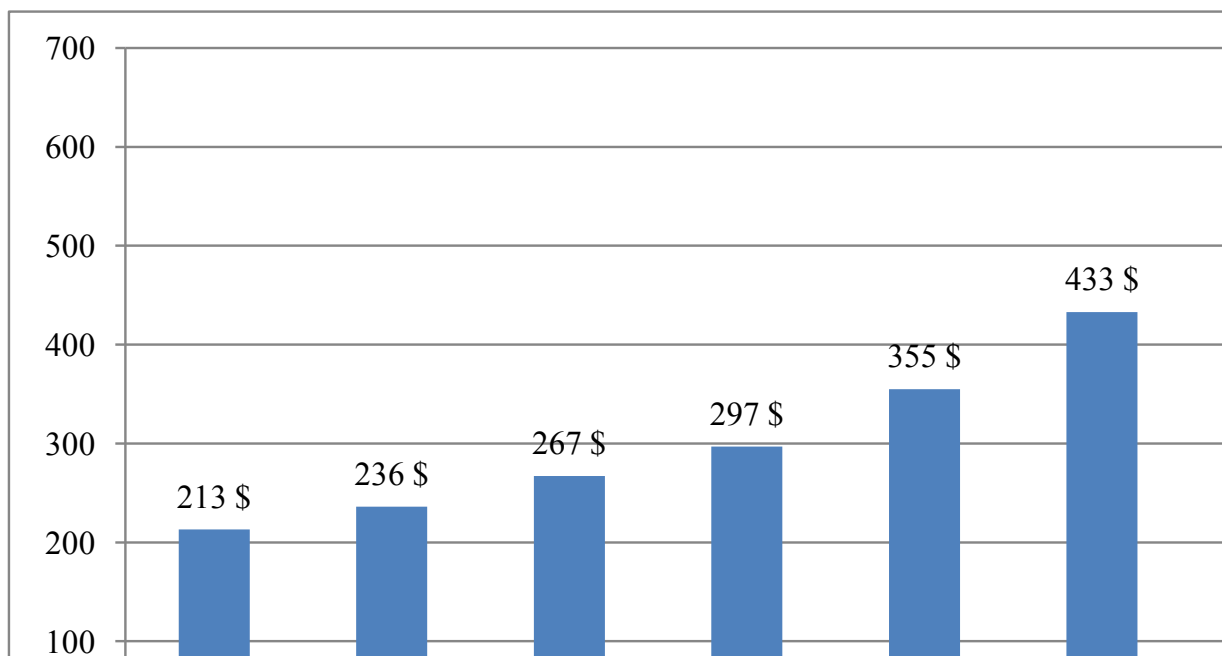


Fig 2. Global Online Retail Sales (Billion USD) 2006-2013. Euromonitor International, Global Internet Retailing Value and Internet Penetration, 2014.

The table clearly shows that the volume of retail e-commerce is tripled in the period. It's also noteworthy to mention that e-commerce has been one of the few sectors that overcome the Global Financial Crisis of 2009 with minimal impact. Not only did it maintain its growth but also it grew more than 200 percent in the following 4 years.

Table 1. The 2013 Global Retail E-commerce Index

Rank	Country	Online market size (40%)	Consumer behavior (20%)	Growth potential (20%)	Infrastructure (20%)	Online market attractiveness score
1	China	100,0	68,8	100,0	51,1	84,0
2	Japan	100,0	100,0	17,4	99,1	83,3
3	United States	100,0	77,6	39,8	96,5	82,8

4	<b>United Kingdom</b>	100,0	77,5	14,7	86,3	75,7
5	<b>South Korea</b>	79,6	97,4	93	95,1	72,2
6	<b>Germany</b>	90,3	78,3	28,1	65,1	70,4
7	<b>France</b>	85,5	75,7	7,4	71,6	65,2
8	<b>Brazil</b>	37,2	51,2	64,7	64,1	50,9
9	<b>Australia</b>	15,7	89,4	46,2	86,9	50,8
10	<b>Canada</b>	17,7	73,5	48,3	91,5	49,7
11	<b>Singapore</b>	2,3	93,1	28,9	100,0	45,3
12	<b>Argentina</b>	9,2	59,1	75,7	68,0	44,2
13	<b>Russia</b>	34,9	51,8	56,4	42,3	44,1
14	<b>Hong Kong</b>	3,2	93,7	17,2	100,0	43,4
15	<b>Italy</b>	16,1	52,2	64,3	60,7	41,9
16	<b>Sweden</b>	12,1	77,5	21,7	85,7	41,8
17	<b>Slovakia</b>	2,0	71,5	86,4	44,3	41,2
18	<b>New Zealand</b>	2,5	92,3	28,1	78,5	40,8
19	<b>Netherlands</b>	16,2	77,5	17,4	73,9	40,2
20	<b>Chile</b>	3,9	61,0	56,5	74,8	40,0
21	<b>Finland</b>	13,3	77,2	13,6	82,1	39,9
22	<b>Turkey</b>	10,7	26,6	72,9	78,4	39,9
23	<b>Venezuela</b>	2,5	49,5	100,0	42,1	39,3
24	<b>Belgium</b>	9,8	70,6	26,5	73,1	38,0
25	<b>U.A.E.</b>	0,9	50,3	49,2	87,8	37,8
26	<b>Norway</b>	12,3	77,5	97	75,7	37,5
27	<b>Ireland</b>	7,2	62,3	42,2	67,9	37,4
28	<b>Denmark</b>	10,2	78,3	14,1	73,0	37,2
29	<b>Switzerland</b>	13,2	68,2	10,9	79,4	37,0
30	<b>Malaysia</b>	1,0	63,0	44,2	75,0	36,8

AT Kearney, The 2013 Global Retail E-commerce Index, 2014.

Country level E-commerce Index present one of the most striking proof of the effect of globalization on e-commerce. Although most of the countries which have the highest score in the top 30 countries online market attractiveness score, as of 2013 many developing countries are performing better than the developed ones. Being at the top of the list China shows that in the forthcoming period market size will be one of the crucial factors that affect the e-commerce performance of the countries.

### 3.2. E-Commerce in Turkey

In accordance with the global trends the e-commerce sector is growing rapidly in Turkey too. The large youth population familiar with new technology and solid economic growth, with real internet retailing value expanding by 61.1% over 2006-2011 plays a vital role in this. However, although internet usage is expanding rapidly, telecom penetration levels remains below average Western European levels, meaning online businesses have a limited audience both for sales and internet marketing (Euromonitor International, 2014).

Table 2. Internet Users in Turkey 2004-2013 (per 100 people)

Year	2004	2005	2006	2007	2008	2009	2010	2011	2012
Users	14,58	15,46	18,24	28,63	34,37	36,4	39,82	43,07	45,13

International Telecommunication Union, World Telecommunication/ICT Development Report and Database, and World Bank estimates.

Although the percentage of users tripled in Turkey between 2004-2013 and the rate is well above the World average (34,3%) it is far behind the Europe which is 63,2%. However further expansion is expected in the following years due to strong economic growth, rising IT literacy, improving telecoms infrastructure and the young population.

The Turkish youth population is increasingly technologically literate, having grown up in the internet age. This trend is exacerbated by Turkey's growing wealth, which is allowing more consumers to buy luxury goods such as smartphones and PCs, as well as receive improved technology skills training. Turkey's GDP per capita expanded by 11.5% in real terms over 2006-2011. Rising internet use has been an obvious boon for e-commerce, with increasing usage of digital and social media allowing increased exposure for e-tailers through online advertising. Internet users made up 43.3% of the population in 2011, while the value of internet retailing expanded by 61.1% in real terms over 2006-2011 ((Euromonitor International, 2014).

Table 3. Commercial Domestic Use Credit Cards

Year	2008	2009	2010	2011	2012	2013	2014
Number of Transactions	1.589.918.628	1.739.108.699	1.935.527.250	2.153.048.293	2.392.907.425	2.593.111.101	414.939.054
Transaction Amount (Million TL)	162.723,70	179.390,14	208.625,14	258.371,86	323.836,74	379.124,10	62.043,24

Bankalar Arası Kart Merkezi, Turkey, 2014.

Table 4. Commercial Card Payments Made on the Internet Transactions

Year	2008	2009	2010	2011	2012	2013	2014
Number of Transactions	57.689.412	63.149.123	87.995.976	121.928.664	153.394.568	164.395.488	31.067.418
Transaction Amount (Million TL)	7.613,04	8.431,35	13.100,71	20.686,4	28.032,34	31.947,5	6.438,36
Percentage of Use	4,68%	4,70%	6,28%	8,01%	8,66%	8,43%	10,38%

Bankalar Arası Kart Merkezi, Turkey, 2014.

Credit card usage statistics of Turkey displays the potential of e-commerce in Turkey. In the period of 2008-2013 the increase in number of commercial transactions is about 63% and the transaction amount rise more than two times. Whereas the figures commercial card payments made on the internet transactions are much more vibrant. The number of transactions increased about 3 times in the same period while the transaction amount is rising more than 4 times. The share of use of credit cards in internet transaction is also in a rapid growth trend. The rate increased from 4,68% to 10,38% in 6 years as shown in the table. The figures are visualized as follows;

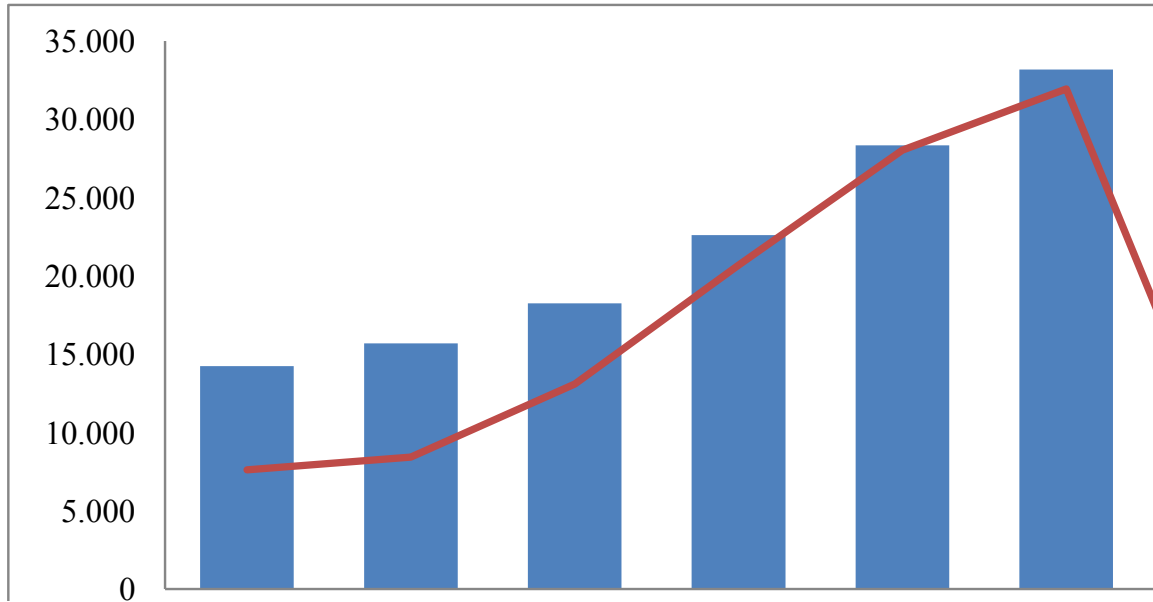


Fig 3. Use of Credit Cards in Commerce and Internet Transactions (Million TL)

It's clear that in Turkey internet transactions are growing much faster than commercial transactions. As mentioned above the figures are far behind the European rates where e-commerce may form 24% of enterprises' total revenue nevertheless the rapid growth can't be ignored.

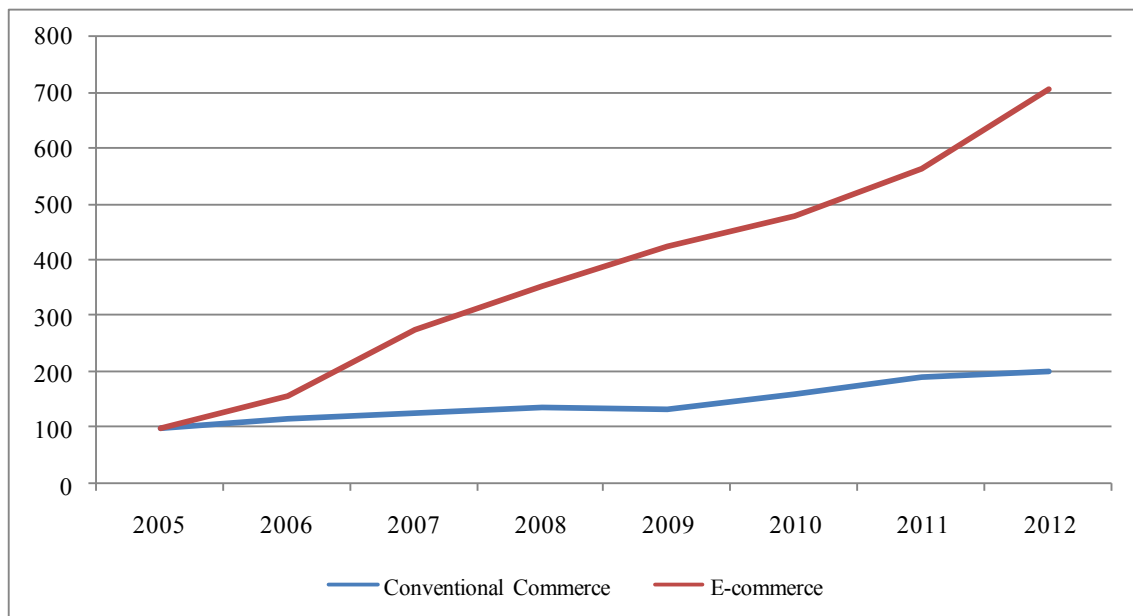


Fig 4. Conventional Commerce and E-Commerce Index Comparison 2005-2012. Türkiye İstatistik Kurumu, Kısa Dönemli İş İstatistikleri Ticaret-Hizmet Göstergeleri 2014.



Finally conventional commerce and e-commerce index rates of the period 2005-2012 are displayed above. The index based on 2005 shows that conventional trade of goods and services grew about 200% in the period containing past 7 years. However in the same period e-commerce performed much better and grew more than 700%. Although there are many factors that shape the figures it can be concluded that just as it affected many economic, cultural and social aspects in Turkey in the last period, globalization process also contributed to infusion of e-commerce in Turkey rapidly.

When the globalization issue has been taken into account the direction of the relationship varies. The more developed countries have created a robust infrastructure of technology and telecommunications decades before. As a result, it would be more practical to mention the effect of globalization on e-commerce for those countries rather than the effect of e-commerce on globalization. However, globalization is rather new for Turkey and the developing countries alike and they are taking the advantage of it as they globalized. In Turkish case, the amount of the people which have access to internet tripled in the last ten years and reflection of this on commercial card payments made on the internet transactions has been much better. In this regards for developing countries such as Turkey it can be concluded that globalization is more effective on e-commerce than vice versa.

#### 4. Conclusion

Globalization supported the global economy by the decline in administrative barriers to trade, sharp falls in the costs of transportation and communication, fragmentation of production processes and the development in information and communication technology. Telecommunications and transport links flourished by the globalization created a new way of accessing to the new markets through e-commerce. However all the countries and firms couldn't make use of this advantage same way due to their opportunities to access to technology and telecommunications.

In this context the way globalization affect e-commerce and the opposite situation come into agenda. In a broad sense e-commerce concept, affecting employment patterns, productivity and industry structure, is much broader than it's perceived and relationship between globalization and e-commerce is complicated. The literature on the subject and the evidences presented in the study supports both impact directions and it would be more accurate to talk about a mutual relation rather than a one way relation.

Telecommunications and technological substructure of the countries are directly benefited from the globalization process. In this regards developed countries which are into globalization process way before have solid infrastructure of telecommunications and technology. As a result for these countries e-commerce is more effective on globalization than the opposite case. However in developing countries in which globalization process is rather new and technological infrastructure is poorer the situation is different. In this study e-commerce in Turkey is investigated as a reference to the developing countries.

The large youth population familiar with new technology and solid economic growth ensures the rapid growth of e-commerce in Turkey in the last decade. However although it is over the World average, the amount of people accessing the internet it is far behind the European rates. The internet user statistics show that user rate increased from 14,5 to 45,1 in the period of 2004-2012. Likewise commercial card payments made on the internet transactions in Turkey 7,6 Billion TL to 31,9 Billion TL between 2008 and 2013. The figures clearly shows that as the globalization diffuses further in the country the more e-commerce transactions is being achieved due to the improvements in telecommunications and technological infrastructure. In this regards for developing countries such as Turkey, globalization is more effective on diffusion of e-commerce than the opposite case.

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