

## **ECONOMIC INTEGRATION BETWEEN THE EU AND CHINA**

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China and the EU are becoming the strategic partnership since 2010. This partnership is in different fields such as economic, politic etc. In this study, it's aimed to investigate the trend of the economic integration between the EU and China between the years 2003-2013 statistically. The variables include import and export values (million Euro), growth rates (%) and the distribution of the values into main sectors. Friedman test statistics and Chi-Square test will be applied due to the sample size is less than 30. It's aimed to investigate by Friedman test that the trend is significant in these years. The data are obtained from European Commission's Statistics web sites.

**JEL classification:** F15, L16, L50

**Keywords:** European economy, economic integration, Chinese economy

### **INTRODUCTION**

The EU-China strategic partnership, which is “a comprehensive, coherent and coordinated long-term framework for political cooperation”. Right now, the EU has 10 strategic partnerships with individual countries: USA, Canada, Japan, Brazil, Russia, India, China, South Africa, South Korea and Mexico.<sup>1</sup>

Looking globally beyond the EU, is the need for international dialogues on financial markets and their regulation with the United States and Japan, but also with the growing new economies in China and India.<sup>2</sup>

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<sup>1</sup> Wiktor Sajdak, “Does EU-China Dialogue Architecture fit the Objectives of EU Strategic Partnership Policy towards China?” **Master in Advanced European and International Studies, Master Thesis**, 2013. p. 16.

<sup>2</sup> Fabienne Ilzkovitz et al., “Steps towards a deeper economic integration: the Internal Market in the 21st century A contribution to the Single Market Review”, **European Commission Directorate-General for Economic and Financial Affairs Economic Papers**, 2007, p. 68.

The trade between China and EU has kept growing with the development of European integration, and it increases more quickly than any other time in history. Up to 2010, the trade volume between China and European Union has increased to 479.71 billion 6 US dollars, which is more than 200 times of the trade volume in 1975, and nearly 20 times of 1993.<sup>3</sup>

It is often overlooked that Western Europe was China's biggest trading partner during the 1960s accounting for one third of China's trade with the outside world. During the 1980s Japan and Hong Kong became a more important trading partner of China and in the 1990s China-US trade also grew rapidly.<sup>4</sup>

This study investigated the growth is significant or not statistically. For this purpose, it's used EU Commission reports outputs that include import and export growth rates and values in million euro and any other data.

### **1. Economic Relations Between the EU and China**

European commerce plays an important role in the EU economy. The commerce sector provides for 27 million jobs and generates 13% of European GDP. Already today traders have established close business relations with Chinese suppliers of consumer goods. A further strengthening of trade relations with China will support the expansion of businesses and help create new jobs. The distribution sector could contribute much more to the economic growth in Europe as it is for example in the United States.<sup>5</sup>

From 2002 China-EU trade has experienced a new surge and in 2003 trade grew by more than 44 per cent or US\$40 billion year-on-year. By 2008, the value of trade between China and the EU had increased by about US\$354 billion compared to 2000 and had reached US\$426 according to Chinese sources.<sup>6</sup>

Germany, France, Italy, the United Kingdom and the Netherlands are China's five most important trade partners in EU. Germany alone accounts for more than 40 per cent of EU's

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<sup>3</sup> Datong Feng, "The development of trade between EU and China", **Bachelor Essay of Linnaeus University School of Business and Economics**, Spring 2011, p. 4.

<sup>4</sup> Kjeld Erik Brodsgaard, **Wai Mun Hong, EU-China Relations: Economics Still in Command?**, EAI Background Brief, No. 484, 2009. p. 1.

<sup>5</sup> Foreign Trade Association, **EU – China Trade Relations**, FTA Publications: Brussels, 2006, p. 14.

<sup>6</sup> Brodsgaard, Hong, p. 1.

export to China (See Chart 3). In terms of EU import from China there is a more equal distribution, although Germany still holds the largest share of the pie.<sup>7</sup>

The EU's identity is rather distinct from that of China. It is often perceived to be a normative actor, founding its policies on values, institutions and cooperation rather than power politics. The EU should also be critical of its leverage as a normative actor. China may well recognize the advantages of cooperating with the EU and of learning from it in certain areas, but it is certainly not willing to accept the tutelage of the EU. China is not a prospective EU member, nor does it see itself as a weak nation, depending on the EU for support in its political and economic reform process.<sup>8</sup>

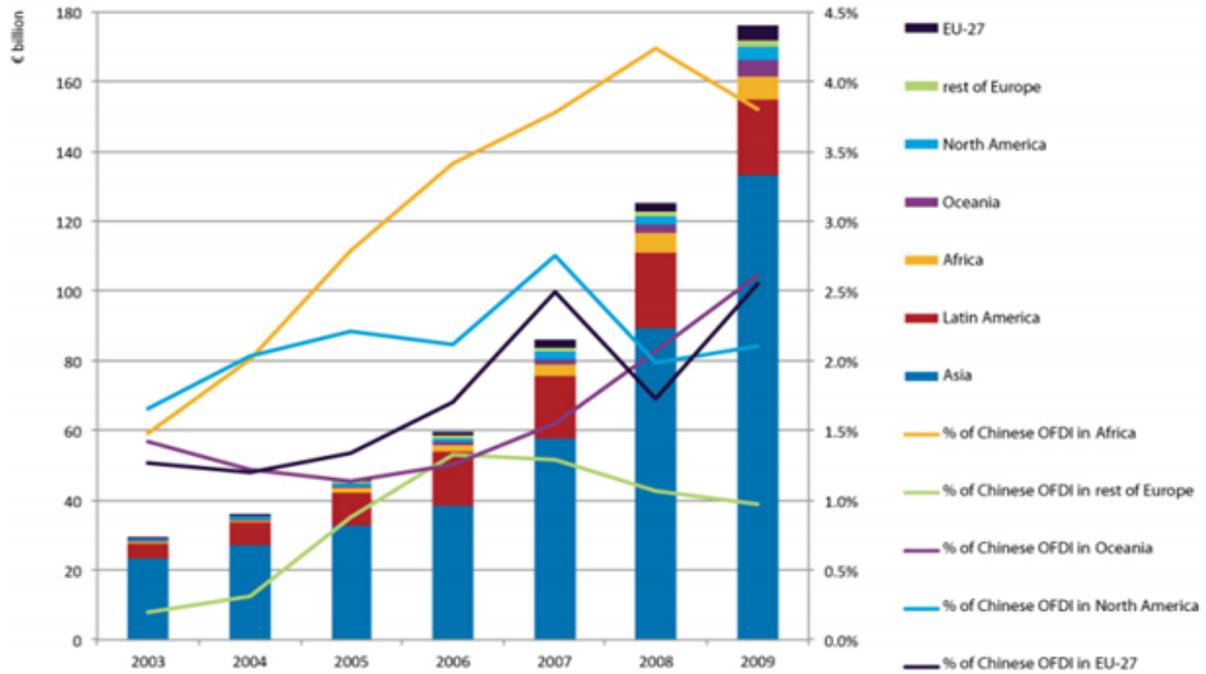
In the figures below, it's seen that Chinese Overseas Direct Investment (OFDI) rates. According to Figure 1, the EU saw an increase in Chinese inward investment from € 0.3 billion (US\$ 0.4 billion) to €4.5 billion (US\$6.3 billion) between 2003 and 2009 Chinese investments there were rising faster than the global average until the Anglo\American financial and economic crisis. Then the downward pressure on investment worldwide translated into a far steeper decline of Chinese FDI in the EU (and North America).<sup>9</sup>

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<sup>7</sup> Brodsgaard, Hong, p. 3.

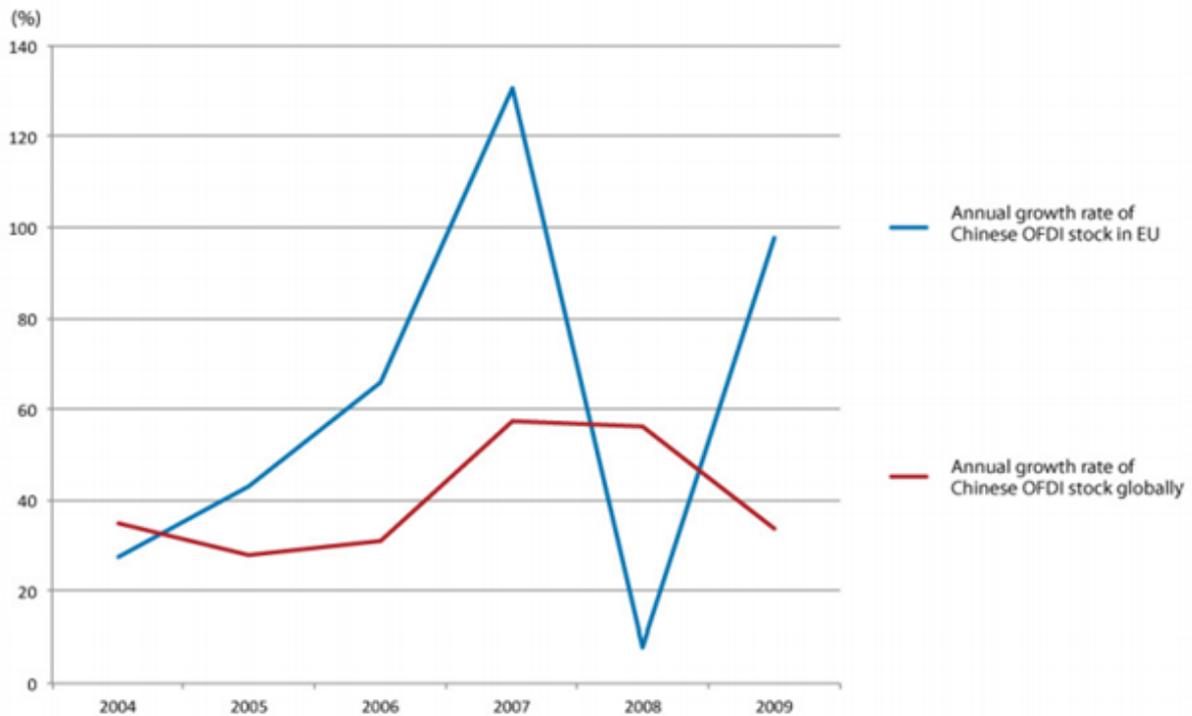
<sup>8</sup> Gustaaf Geeraerts, "China, the EU, and the New Multipolarity", *European Review*, Vol. 19, No. 1, p. 63.

<sup>9</sup> Jeremy Clegg, Hinrich Voss, *Chinese Overseas Direct Investment in the European Union*, Europe China Research and Advice Network, London, 2012, p. 17.



**Figure 1:** Distribution of Chinese OFDI, 2003-2009 (€ billion, %)

**Source:** European Commission, European Union, Trade in goods with China, Directorate-General for Trade, 2014.



**Figure 2:** Annual growth rates of Chinese OFDI, 2004-2009 (%)

**Source:** European Commission, European Union, Trade in goods with China, Directorate-General for Trade, 2014.

In Figure 2, it's seen that annual growth rate of Chinese OFDI stock in EU has a peak in 2007 and while it has the lowest degree in 2008. It has started to rise again since 2008.

## 2. RESEARCH METHODOLOGY

### 2.1. The Objective of the Study

In this study, it's aimed to investigate the trend of the economic integration between EU and China in main sectors between the years 2003-2013 statistically.

### 2.2. The Importance of the Study

With this study's results, it can be determined that whether the import and export rates between China and the EU are significant statistically. Due to the results we can conclude that how will affect the economic integration between China and the EU to the global economic environment in near future.

### 2.3. Data Collection and Analyzing Method

The data is obtained from European Commission's web sites. Nonparametric tests can be applied due to the sample size is less than 30. Between the years 2003-2013 the rates of trade with China of the EU, (export and import rates) are tested with Friedman test statistics.

Using growth rates that are indicated below, Friedman test is performed in order to determine that the rate differences between import and export of the trade with China of the EU are significant or not in these two period. Using values in million euro that take place in EU's trade of China, chi-square test is performed in order to determine that changes in import and export are significant or not in these years.

**Table 1: The EU, Trade with China (value, million euros); growth (%)**

Years	Value. import	Value. export	Growth in import	Growth in export
2003	107	41	20,8	15,6
2004	129	48	21,2	16,7
2005	161	52	24,6	7
2006	196	64	21,6	23,1

2007	234	72	19,4	12,8
2008	249	78	6,5	9
2009	215	82	-13,6	5,3
2010	284	113	31,7	37,7
2011	295	136	4	20,2
2012	292	144	-1,1	5,6
2013	280	148	-4	3

Source: European Commission Directorate-General for Trade, 2014, p. 4.

## 2.4. Results

The growth values (million euro) in import and export are tested separately with chi-square test statistics. Depending on this test the growth in import between EU and China in the period of 2003-2013 is significant. Similarly the growth in export between EU and China in the period of 2003-2013 is significant.

**Table 2: Chi-Square test (value. import)**

	value.import
Chi-Square(a)	201,036
Df	10
Asymp. Sig.	,000

a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 222,0.

**Table 3: Chi-Square test (value. export)**

	value.export
Chi-Square(a)	176,910
df	10
Asymp. Sig.	,000

a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 88,9.

Depending on the chi-square tests, the changes of import and export values are significant. (0,05>0,000)

If we look at Table 1, it's pointed out that between the periods of 2003-2007 the values of import and export are increasing while the values are usually decreasing between the periods

of 2008-2013. Because of this, the time range is divided into two periods as 2003-2007 and 2008-2013. It's tested that the change is significant or not in these two periods addition to the analyses that are indicated above. The findings weren't indicated again in tables but two periods have significant changes at 0,05 significance level.

**Table 4: Descriptive Statistics of Growth Rates of Import and Export**

	N	Mean	Std. Deviation	Minimum	Maximum
growthimport	5	21,5200	1,91102	19,40	24,60
growthexport	5	15,0400	5,86711	7,00	23,10

**Table 5: Test Statistics<sup>a</sup>**

N	5
Chi-Square	1,800
df	1
Asymp. Sig.	,180

a. Friedman Test

The growth rates of import and export between the EU and China in the years 2003-2007 are tested. Depending on the test the difference between the growth of import and export rates are not significant in these years ( $0,05 < 0,180$ ).

Secondly the growth rates of import and export between the EU and China in the years 2008-2013 are tested. Depending on the test there is significantly difference in these years and growth of export rates are significantly higher than growth of import rates ( $0,05 > 0,014$ ).

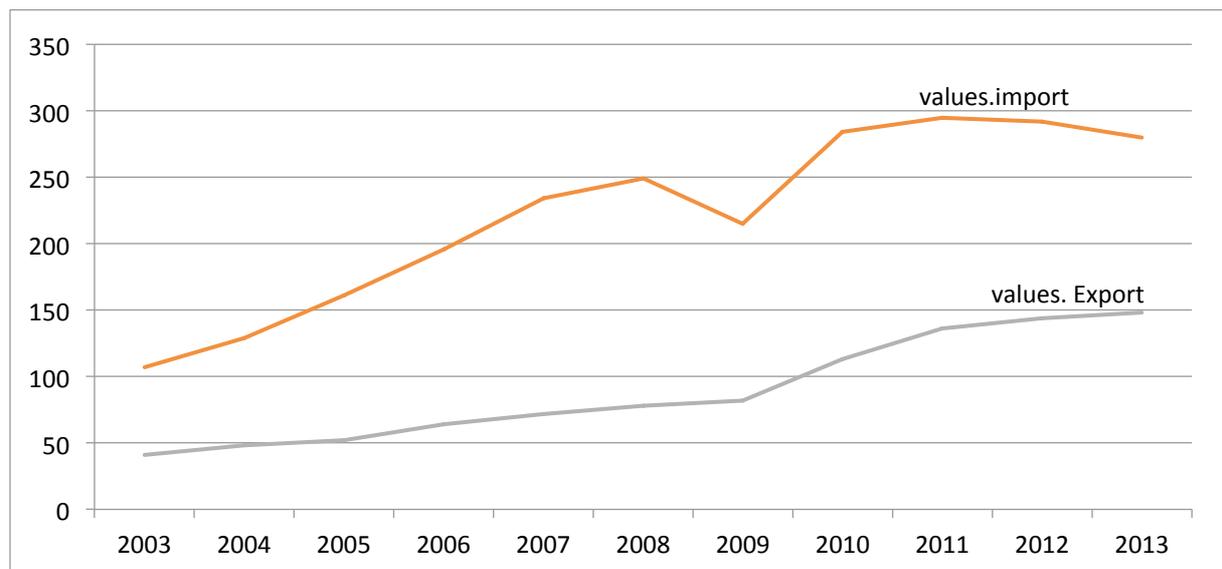
**Table 6: Descriptive Statistics**

	N	Mean	Std. Deviation	Minimum	Maximum
growth.import	6	3,9167	15,31841	-13,60	31,70
growth.export	6	13,4667	13,34671	3,00	37,70

**Table7: Test Statistics<sup>a</sup>**

N	6
Chi-Square	6,000
df	1
Asymp. Sig.	,014

a. Friedman Test



**Figure 3:** The Trend of Values in Export and Import of the EU with China

**Source:** European Commission Directorate-General for Trade, 2014, p. 4.

According to the Friedman test, we have seen that the growth of import and export rates of the EU trade with China are significantly different. In the Figure above, the difference is indicated in a graph but in values (million euro) instead of growth rates.

**Table 8: Sectoral Values of Imports, EU with China**

	Imports (Mio €)				
	2009	2010	2011	2012	2013
Total	215,274	283,598	294,835	291,620	280,055
Food and live animals	3,213	3,878	4,299	4,186	4,211
Beverages and tobacco	110	152	166	160	140
Crude materials, inedible, except fuels	1,914	2,653	3,132	2,865	2,585
Mineral fuels, lubricants and related materials	282	304	378	315	217
Animal and vegetable oils, fats and waxes	35	34	55	74	72
Chemicals and related prod, n.e.s.	7,970	11,043	13,083	13,014	13,128
Manufactured goods classified chiefly by material	24,738	32,914	37,517	36,155	35,112
Machinery and transport equipment	101,966	145,452	146,190	146,298	139,251
Miscellaneous manufactured articles	74,127	85,951	88,688	87,372	84,286
Commodities and transactions n.c.e.	696	805	894	753	586
Other	222	412	433	427	466

Source: European Commission Directorate-General for Trade, 2014, p. 8.

As it's seen in Table X, three main sectors which have the highest degree in imports of the EU trade with China between the years 2009-2013 are machinery and transport equipment, miscellaneous manufactured articles and manufactured goods classified chiefly by material. Chi-square test is performed in order to determine the changes in import in these three sectors are significant in this period.

**Table 9: Descriptive Statistics**

	N	Mean	Std. Deviation	Minimum	Maximum
machinery	678	137,7316	15,28050	102,00	146,00

**Table 10: Test Statistics**

	machinery
Chi-Square	124,442 <sup>a</sup>
df	3
Asymp. Sig.	,000

a. 0 cells (0,0%) have expected frequencies less than 5. The minimum expected cell frequency is 169,5.

The change in import values of machinery and transport equipment in the years of 2009-2013 is significant. ( $0,05 > 0,000$ ).

**Table 11: Descriptive Statistics**

	N	Mean	Std. Deviation	Minimum	Maximum
miscellaneous	420	84,3286	5,05499	74,00	89,00

**Table 12: Test Statistics**

	miscellaneous
Chi-Square	1,643 <sup>a</sup>
df	4
Asymp. Sig.	,801

a. 0 cells (0,0%) have expected frequencies less than 5. The minimum expected cell frequency is 84,0.

The change in import values of miscellaneous manufactured articles in the years of 2009-2013 is not significant. ( $0,05 < 0,801$ ).

**Table 13: Descriptive Statistics**

	N	Mean	Std. Deviation	Minimum	Maximum
manufactured	167	34,0060	4,13987	25,00	38,00

**Table 14: Test Statistics**

	manufactured
Chi-Square	3,030 <sup>a</sup>
df	4
Asymp. Sig.	,553

a. 0 cells (0,0%) have expected frequencies less than 5. The minimum expected cell frequency is 33,4.

The change in import values of miscellaneous manufactured articles in the years of 2009-2013 is not significant. ( $0,05 < 0,553$ ).

## CONCLUSION

Depending on both literature review and empirical analyze, it can be said that trade with China is important for the EU in many areas. Thus, in March 2014, European Commission explained the importance of their trade relations with China with this expression: *“Just two decades ago, China and the EU traded almost nothing. Today, we form the second-largest economic cooperation in the world. In a remarkably short timeframe, our economies have integrated to a point where it is difficult to imagine one without the other”*.

In this study it's mainly investigated the import and export changes of the EU trade with China. It's aimed to determine that what the trend will probably be after 2013. On the other hand, the findings can be demonstrated that in which sectors the EU depends on Chinese economic development. It's found that between the years 2008-2013, growth of export rates are significantly higher than growth of import rates in the EU trade with China.

On the other hand, China is the EU's biggest supplier with € 279.9 billion worth of imported goods in 2013 (down by 4% or 11.7 billion compared to 2012).<sup>10</sup> According to the results of this study, in the future it's expected the integration will get bigger and the growth of import will be reduced while the growth of export will be increased.

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<sup>10</sup> European Commission, “Facts and Figures on EU-China Trade”  
[http://trade.ec.europa.eu/doclib/docs/2009/september/tradoc\\_144591.pdf](http://trade.ec.europa.eu/doclib/docs/2009/september/tradoc_144591.pdf)

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