

## **A Study on International Business Competitiveness in Ship Industry**

<sup>1</sup> Jae-Sung Lee

1. First Author, Professor, College of Commerce & Economics, Donggeui University, Busan, Korea. Tel: +82-51-890-2563  
E-mail: [jslee7@deu.ac.kr](mailto:jslee7@deu.ac.kr).

Received: August 10, 2017., Revised: September 01, 2017., Accepted: September 17, 2017.

### **Abstract**

The main target to do this analysis is to find out the competitiveness between 2 countries(Korea and USA) in the ship business industry. Ever since free from Japanese empire domination of modern history in Korean peninsular, Korea has been strong relationship with USA almost every fields. The purpose of this research is to realize which country is more competitive between 2 country's trade structure.

This research conducted for period from 2000 to 2016. Expecting effect is to learn how to improve ship industry for 2 countries. Research method is used by comparative advantage trade theory.

Even though Koran government has been accomplishing trade stimulus environment against USA ship industry, it is research limitation that overseas productions both Korean & USA are not available due to company business strategy.

From early 50's, every USA industries hold a dominant position so far. Now, Korea is comparative advantage against that of USA in the field of ship industry. Sound competition relationship is good for both 2 countries for mutual benefits. The future prospect is Korea needs export market diversification to enlarge economic growth in the long run.

**Keywords:** Ship Industry, Market share, Trade Structure.

### **1. Introduction**

Till early 1960's after Korean war, Korean economy is in a position to USA dependence. USA economic aids during mid-1950's and early 1960's occupy approximately 10% of Korean GNP and account for 40% of Korean total public revenue. USA didn't simply provide economic aids. They practically play a crucial role and give a absolute influence to Korean economic policy and economic management as a supervisor that the Korean economy goes well which is as if IMF supervise and control Korean economic management when IMF supplied relief fund to Korean government during economic crisis in 1997. It is true that Korea has realistically been receiving concentrated economic aids from USA rather than any other developing countries. The economic aids from USA during 1946~1978 is US\$6,000million which is pretty much huge aid volume compared to US\$6,900 of total economic aids from USA for total African countries and US\$14.9billion of total economic aids from USA for overall south American countries at the same period. The time when USA dependence of Korean economy started to diminish is early 1960's. This is resulted in both demand & supply aspects. In terms of supply aspect, USA got financial burden as they increased military and economic aids to all over world, on the other hand, Korean government tried to decrease USA economic dependence and to boost economic self-reliance after overall review for customs tax and exchange rate policy in order to promote export volume with a "Economic Development Plan for 5 years". Over

20years after liberty from Japanese imperialist, USA who gave absolute influence to Korean economy takes a position as a major trade and investment partner. Under such circumstances, to review and to analyze the competitiveness of the ship industry between 2 countries is pretty much meaningful as it is one of the major industries in every countries. This study consists of 5 Chapters. Chapter 2 has previous analytical research study. Chapter 3 review structural characteristic of Korea-USA ship industry taking advantage of general trade statistics. Chapter 4 examine and verify which country has more competitiveness by the data calculated by author according to UN COMTRADE statistics database with research tools(Market Share, Trade Specification Index and Revealed Comparative Advantage Index). Finally, Chapter 5 summarize this analytical research study.

## 2. Previous research work

There are a few research methods to analyze trade competitiveness. I choose 3 tools among them such as revealed comparative advantage, trade specialization index and market share. Analytical research is conducted by time serial analysis from 2000 to 2016 in order to examine and verify exact and correct figure value. Regarding to precedent research, Lee(2017) by revealed comparative advantage index reviews structural characteristic and competitiveness change in cosmetic industry among Korea, China and Japan, Ding & Rhee(2016) by revealed comparative advantage index comparatively analyze international competitiveness about automobile industry between Korea and China, Hong and Son(2017) by revealed comparative advantage index study export competitiveness between Korea and Japan in the Asian market, Roger and David(2015) by revealed comparative advantage index analyze comparing advantages about US trade with the rest of the world during 1968~2008.

Per researches by trade specialization index, Chang(2016) by trade specialization index analyze trade competitiveness between Korea and Germany, Nam and Cho(2016) by trade specialization index analyze economic effectiveness of Korea-China FTA which focus on influence to import & export for manufacturing companies in Chungnam area, Choi and Li(2016) by by trade specialization index analyze trade pattern among Myanmar and Korea-China-Japan, Ku, Park, and Dou(2016) by trade specialization index explain how to set up specialization strategy and agricultural products trade status between Korea and China, Kim, Jun, Choi and Han(2016) by trade specialization index study marketing mix strategy how seasoned laver enters into Chinese market, Lee(2016) by trade specialization index study current status on Knowledge-based service industry and international comparison of export competitiveness.

Per research for market share, Lee and Byun(2016) by market share index study competition in product market and enterprise's risk chase, Kim(2016) by market share index study EU gas market liberalization and EU's energy strategy change against Russia, Ahn(2016) by market share index study economic union and development on low-cost aircraft industry network. Gabriele(2017) suggest the way that how to materialize the market building through regional integration agreements, especially, between the EU and the Asean way.

## 3. The Major Partner Countries in Export & Import field

Here is actual top 10 export & import countries's with Korea from 2000 to 2016 as follows;

**Table 1:** Top 10 Import & Export Country in 2000      Unit: US\$1,000, Ton

Year	Country	Export weight	Export Amount	Trade Balance
2000	USA	11,535,736.7	37,610,630	8,369,002
2000	JAPAN	25,845,414.3	20,466,016	-11,361,927
2000	CHINA	22,116,866.1	18,454,540	5,655,812
2000	HONGKONG	8,239,164.3	10,708,094	9,447,373
2000	TAIWAN	5,188,379.8	8,026,625	3,325,885
2000	SINGAPORE	2,158,603.7	5,648,189	1,925,322
2000	ENGLAND	1,230,554.2	5,379,833	2,804,132
2000	GERMANY	948,131.1	5,153,833	529,177

2000	MALAYSIA	1,676,267.0	3,514,693	-1,363,265
2000	INDONESIA	2,973,770.7	3,504,036	-1,782,872

Source: Own

**Table 2: Top 10 Import & Export Country in 2005** Unit: US\$1,000, Ton

Year	Country	Export Weight	Export Amount	Trade Balance
2005	CHINA	31,332,884.4	61,914,983	23,266,795
2005	USA	13,635,581.2	41,342,584	10,756,748
2005	JAPAN	16,132,620.5	24,027,438	-24,375,745
2005	HONGKONG	4,282,462.2	15,531,092	13,487,979
2005	TAIWAN	3,214,189.2	10,862,932	2,813,382
2005	GERMANY	1,438,772.1	10,303,964	529,754
2005	SINGAPORE	3,621,615.7	7,406,634	2,088,970
2005	ENGLAND	697,514.3	5,338,844	2,189,774
2005	INDONESIA	5,027,059.5	5,045,582	-3,138,851
2005	MALAYSIA	1,730,522.8	4,608,171	-1,403,468

Source: Own

**Table 3: Top 10 Import & Export Country in 2010** Unit: US\$1,000, Ton

Year	Country	Export Weight	Export Amount	Trade Balance
2010	CHINA	36,677,789.0	116,837,833	45,264,231
2010	USA	13,169,761.4	49,816,058	9,413,367
2010	JAPAN	13,372,753.9	28,176,281	-36,119,835
2010	HONGKONG	4,998,947.8	25,294,346	23,348,413
2010	SINGAPORE	8,525,792.7	15,244,202	7,394,672
2010	TAIWAN	4,340,522.4	14,830,499	1,183,419
2010	INDIA	5,181,910.0	11,434,596	5,760,140
2010	GERMANY	2,321,885.1	10,702,180	-3,602,716
2010	VIETNAM	4,938,027.2	9,652,073	6,321,259
2010	INDONESIA	7,133,736.4	8,897,299	-5,088,548

Source: Own

**Table 4: Top 10 Import & Export Country in 2016** Unit price: US\$

Year	Country	Export Weight	Export Amount	Trade Balance
2016	CHINA	43,616,607.1	124,432,941	37,452,782
2016	USA	17,703,481.6	66,462,312	23,246,382
2016	HONGKONG	4,529,597.2	32,782,449	31,167,604
2016	VIETNAM	7,930,053.0	32,630,457	20,135,303
2016	JAPAN	14,803,309.0	24,355,036	-23,111,555
2016	SINGAPORE	10,534,207.2	12,458,894	5,652,546
2016	TAIWAN	7,648,154.4	12,220,455	-4,182,746

2016	INDIA	7,189,971.7	11,596,286	7,407,002
2016	MEXICO	2,873,626.7	9,720,804	6,025,433
2016	MARSHAL ISLAND	3,240,974.3	7,728,391	7,595,493

Source: Own

When we focus on ship industry and review data from **Table 1** to **Table 4**, we can easily find out that USA is the top crucial export partner after China during 2005~2016 except 2000. It is top 1 export partner in 2000.

As ship business is one of major industries every countries in the world, we have in a good position to compete with other developed countries so far because we have still wonderful comparative advantage position in terms of labor cost. Especially, Korea has been developing economy by labor intensive industries such as textile, footwear, clothes industry by the courtesy of Korean government's export promotion policy.

#### 4. Structural analysis of ship industry between Korea-China

##### 4.1. RCA analysis Index for Korea-USA Ship Industry

It can be analyzed RCA research index for Korea-USA Ship Industry as follows;

**Table 5:** Korean Ship Export Amount to USA Unit price: US\$

Year	Business type	Standard	Counterpart	HS	Trade Volume
2000	Export	Korea	USA	89	\$334,911,498
2005	Export	Korea	USA	89	\$319,213,715
2010	Export	Korea	USA	89	\$140,977,058
2016	Export	Korea	USA	89	\$179,601,635

Source: calculated by author based on UN COMTRADE database

**Table 6:** World Total Ship Export Amount Unit price: US\$

Year	Business type	Standard	Counterpart	HS	Trade Volume
2000	Export	world	world	89	\$39,712,274,667
2005	Export	world	world	89	\$68,418,886,072
2010	Export	world	world	89	\$171,397,391,154
2016	Export	world	world	89	\$108,992,272,534

Source: calculated by author based on UN COMTRADE database

**Table 7:** Korean Total Export Amount to USA Unit price: US\$

Year	Business type	Standard	Counterpart	HS	Trade Volume
2000	Export	Korea	USA	Total	\$37,806,064,725
2005	Export	Korea	USA	Total	\$41,499,402,451
2010	Export	Korea	USA	Total	\$49,991,458,238
2016	Export	Korea	USA	Total	\$66,748,306,308

Source: calculated by author based on UN COMTRADE database

**Table 8:** World Total Commodity Export Amount Unit price: US\$

Year	Business type	Standard	Counterpart	HS	Trade Volume
------	---------------	----------	-------------	----	--------------

2000	Export	world	world	total	\$6,277,897,158,760
2005	Export	world	world	total	\$10,152,763,966,717
2010	Export	world	world	total	\$15,021,460,535,560
2016	Export	world	world	total	\$13,944,462,516,312

Source: calculated by author based on UN COMTRADE database

**Table 9:** RCA Index for Korea-China Industry

Year	①Korean Ship Export against USA/World Total Ship Export	②Korean Total Export against USA/World Total Commodity Export	RCA( = ①/② )
2000	0.00843345038	0.00602209048	1.40041907507
2005	0.00466557895	0.004087498	1.14142660131
2010	0.00082251577	0.0033280025	0.24714998561
2016	0.00164783824	0.00478672492	0.3442517102

Source: calculated by author based on UN COMTRADE database

According to above analysis data, in case ship industry's RCA index is bigger than 1, the ship industry has competitiveness advantage against other industries or if the ship industry is smaller than 1, it has disadvantage against other industries. Thus, when we look into the calculated RCA index of 2000 is 1.400 which means that Korean ship industry has comparative advantage against other industries in USA. Furthermore, the RCA index of 2005 is 1.141 which means even though RCA index is smaller than that of previous analysis degree in 2000, the degree of RCA in 2005 is still over +1. So, during 2000~2005, Korean ship industry has good comparative advantage against other industries in USA, Korea has competitiveness over USA ship industry. However, from 2010, the RCA degree dropped into 0.241 sharply comparing to those of 2000 and 2005. Even though the RCA index in 2016 was improved as 0.344, the RCA index value is far from +1. Therefore, we can come to conclusion that the early 2000 and 2005, Korean ship industry has strong competitiveness against USA industry. On the contrary, from 2010, Korean ship industry does not have comparative advantage against USA ship industry. We can speculate why competitiveness of Korean ship industry is getting weaker from 2010. Among various reasons, the one is, in a sense, manufacturing environments in Korea face hardships together with labor cost does affect ship industry's competitiveness as well as low-labor cost Chinese ship industry set up on a big scale shipbuilding plants throughout mainland China. Chinese newly established shipbuilding plants offer pretty much competitive prices to buyers including worldwide ship business decline. Eventually, those are main reasons that Korean ship industry does not competitiveness against USA ship industry anymore during that period(2010~2016).

#### 4.2. Trade Specialization Index for Korea-USA Ship Industry

Basically, when we make analytical research, we must assess and evaluate USA ship import amount. However, if we do put data of import amount into all of related other database, we will get the false data outcome because import amount contains import tax. In the matter of import tax, we use export amount instead of import amount for your references.

Regarding TSI is between the highest degree +1 and the lowest degree -1, in case this degree is approaching +1, which means the competitiveness of this industry is strong. In other words, export specialization degree is high. While if this degree matches to 0, which means mentioned industry's export volume in a certain country equals to import volume. Finally, in case degree is getting closer into -1, which means import specialization degree is high. As this values represent export & import comparative advantage, the degree shows competitiveness in the bilateral countries or world market. Thus, when we review **Table 10** and **Table 11**, Korean ship export volume against USA is overwhelmingly larger than those of USA throughout whole research period from 2000 to 2016(2000, 2005, 2010, 2016) with 9 digit figures on the other hand, USA ship export volume to Korea is only 6 digit or 7 digit figures which are pretty much less ship export volume than those of Korean volume even though Korean's ship export volume to USA are diminishing such as US\$334,911,498 in 2000, US\$319,213,715 in 2005, US\$140,977,058 in 2010 and US\$179,601,635 in 2016. On the other hand, USA ship export volume to Korea is getting increase as US\$7,019,025 in 2000, US\$13,821,344 in 2005, US\$25,477,729 in 2010 and US\$47,482,465 in 2016 consecutively. Regarding to **Table 12**, in 2000 and 2005, the trade specialization degrees are 0.9589 and 0.9169, which means both

degrees are almost adhere to +1 based on standard level degree 0. We can assume the ship industry in Korea is export specialization rather than import specialization. Additionally, in 2010 and 2016, the trade specialization values are 0.6938 and 0.5818. Even though we can admit those values are diminishing continuously rather than those of previous measured period, the Trade specialization values are still standing towards to +1 from 2000 to 2016 for whole research period.

On the other hand, when we review USA trade specialization index in **Table 13**, USA TSI are as -0.9589 in 2000 and -0.9169 in 2005, -0.6938 in 2010 and -0.5818 in 2016. During the whole research period, from 2000 to 2016, all digits show minus(-)marks. In 2000 and 2005, TSI in USA is too much closer to -1 value which means USA ship industry is exactly import specialization and even though in 2010 and 2016, the values of TSI in USA are receding from -1(end point of import specialization value), those values are coming closer to -1 degree. Eventually, we can understand that Korea has advantage for export specialization, while USA has advantage for import specialization based on research analytical data on **Table 12** and **Table 13**.

**Table 10:** Korean Ship Export Amount to USA Unit price: US\$

Year	Business type	Standard	Counterpart	HS	Trade Volume
2000	Export	Rep.of Korea	USA	89	\$334,911,498
2005	Export	Rep.of Korea	USA	89	\$319,213,715
2010	Export	Rep.of Korea	USA	89	\$140,977,058
2016	Export	Rep.of Korea	USA	89	\$179,601,635

Source: calculated by author based on UN COMTRADE database

**Table 11:** USA Ship Export Amount to Korea

Year	Business type	Standard	Counterpart	HS	Trade volume
2000	Export	USA	Rep.of Korea	89	\$7,019,025
2005	Export	USA	Rep.of Korea	89	\$13,821,344
2010	Export	USA	Rep.of Korea	89	\$25,477,729
2016	Export	USA	Rep.of Korea	89	\$47,482,465

Source: calculated by author based on UN COMTRADE database

**Table 12:** Korea Specialization Index to USA

Year	①Korea Ship Export Amount to USA - USA Ship Export Amount to Korea	②Korea Ship Export Amount to USA + USA Ship Export Amount to Korea	TSI( = ①/② )
2000	327,892,473	341,930,523	0.95894472983
2005	305,392,371	333,035,059	0.9169976636
2010	115,499,329	166,454,787	0.69387808594
2016	132,119,170	227,084,100	0.58180722472

Source: calculated by author based on UN COMTRADE database

**Table 13:** USA Specialization Index to Korea

Year	① USA Ship Export Amount to Korea - Korea Ship Export Amount to USA	② USA Ship Export Amount to Korea + Korea Ship Export Amount to USA	TSI ( = ①/② )
2000	-327,892,473	341,930,523	-0.95894472983
2005	-305,392,371	333,035,059	-0.9169976636
2010	-115,499,329	166,454,787	-0.69387808594
2016	-132,119,170	227,084,100	-0.58180722472

Source: calculated by author based on UN COMTRADE database

### 4.3. Comparative Competitiveness for Market share for Ship Industrial Structure between Korea and USA

Market share is the percentage of sales in a market acquired by a particular company. Markets are often broken down geographically. Companies watch market share carefully to gauge the market's competitiveness. They also use it as guidance on trends relating to their own products, marketing and pricing. As a rule, companies aim for a high market share as it is usually connected to high profits. However, having a very high market share also involves increased risk. It ensures aggressive competition and may lead to anti-trust action. As a result, some companies seek to keep their market share lower than it could potentially be to avoid being targeted by the competition and harsh regulations.

When we review **Table 14** throughout whole research period from 2000 to 2016, Korea has been continuously increasing ship export volume to world market up to 2010 except 2013 compared to those of USA, which express Korea has sufficient production capability with competitiveness against USA ship industry based on the **Table 15**. Nonetheless, in 2016, export volume in both countries were diminished. One of the crucial reasons for this phenomenon is world ship business market going into market saturation point as world economy recession as well as the world-class huge shipbuilding plants are established in asian countries, especially, in the case of China. However, according to **Table 17**, Korea ship industry is overwhelmingly dominant market share against USA ship export to world market. We can easily find out Korea's ship industry is pretty much absolute advantage against that of USA in the analytic research data table.

**Table 14: Korea Ship Export Amount to World**

Year	Business type	Standard	Counterpart	HS	Trade Volume
2000	Export	Korea	World	89	\$8,229,445,107
2005	Export	Korea	World	89	\$17,231,478,460
2010	Export	Korea	World	89	\$46,735,317,078
2016	Export	Korea	World	89	\$33,143,837,020

Source: calculated by author based on UN COMTRADE database

**Table 15: USA Ship Export Amount to World**

Year	Business type	Standard	Counterpart	HS	Trade Volume
2000	Export	USA	World	89	\$1,113,580,188
2005	Export	USA	World	89	\$1,994,335,790
2010	Export	USA	World	89	\$2,629,063,616
2016	Export	USA	World	89	\$2,336,266,418

Source: calculated by author based on UN COMTRADE database

**Table 16: World Total Ship Export Amount**

Year	Business type	Standard	Counterpart	HS	Trade Volume
2000	Export	world	world	89	\$39,712,274,667
2005	Export	world	world	89	\$68,418,886,072
2010	Export	world	world	89	\$171,397,391,154
2016	Export	world	world	89	\$108,992,272,534

Source: calculated by author based on UN COMTRADE database

**Table 17: Market Share for 2 country's Ship Industry (%)**

Year	Business type	Korea	USA	Competitiveness based on market share
		(Korea Ship Export Amount to World/World Total Ship Export Amount)	(USA Ship Export Amount to World/World Total Ship Export Amount)	
2000	Export	0.207	0.028	Korea
2005	Export	0.252	0.029	Korea
2010	Export	0.273	0.015	Korea

2016	Export	0.304	0.021	Korea
------	--------	-------	-------	-------

Source: calculated by author based on UN COMTRADE database

## 5. Conclusions

This research study empirically analyze how Korea-USA trade dependency is moved over 15 years(2000, 2005, 2010, 2016) through revealed comparative advantage index, market share, trade specialization index and. By reviewing this paper, we can acknowledge which country is more competitive between 2 countries in the ship industry. The purpose of this research is to realize which country is more competitive between 2 country's trade structure. Expecting effect is to learn how to improve ship industry for 2 countries. Research method is used by comparative advantage trade theory. Even though Koran government has been accomplishing trade stimulus environment against USA ship industry, it is research limitation that overseas productions both Korean & USA are not available due to company business strategy. From early 50's, every USA industries hold a dominant position so far. Now, Korea is comparative advantage against that of USA in the field of ship industry. Sound competition relationship is good for both 2 countries for mutual benefits. The future prospect is Korea needs export market diversification to enlarge economic growth in the long run.

First, when we look into the calculated RCA index of 2000 is 1.400 which means that Korean ship industry has comparative advantage against other industries in USA. Furthermore, the RCA index of 2005 is 1.141 which means even though RCA index is smaller than that of previous analysis degree in 2000, the degree of RCA in 2005 is still over +1. So, during 2000~2005, Korean ship industry has good comparative advantage against other industries in USA, Korea has competitiveness over USA ship industry. However, from 2010, the RCA degree dropped into 0.241 sharply comparing to those of 2000 and 2005. Even though the RCA index in 2016 was improved as 0.344, the RCA index value is far from +1. Therefore, we can come to conclusion that the early 2000 and 2005, Korean ship industry has strong competitiveness against USA industry. On the contrary, from 2010, Korean ship industry does not have comparative advantage against USA ship industry.

Second, Per reviewing USA trade specialization index(TSI), USA TSI are as -0.9589 in 2000 and -0.9169 in 2005 in 2000, -0.6938 in 2010 and -0.5818 in 2016. During the whole research period, from 2000 to 2016, all digits show minus( - )marks. In 2000 and 2005, TSI in USA is too much closer to -1 value which means USA ship industry is exactly import specialization and even though in 2010 and 2016, the values of TSI in USA are receding from -1(end point of import specialization value), those values are coming closer to -1 degree. Eventually, we can understand that Korea has advantage for export specialization, while USA has advantage for import specialization based on research analytical data

Third, by reviewing whole research period from 2000 to 2016, Korea has been continuously increasing ship export volume to world market up to 2010 except 2013 compared to those of USA, which express Korea has sufficient production capability with competitiveness against USA ship industry. Nonetheless, in 2016, export volume in both countries were diminished. One of the crucial reasons for this phenomenon is world ship business market going into market saturation point as world economy recession as well as the world-class huge shipbuilding plants are established in asian countries, especially, in the case of China. However, Korea ship industry is overwhelmingly dominant market share against USA ship export to world market. We can easily find out Korea's ship industry is pretty much absolute advantage against that of USA in the analytic research data table. Conclusively, the competitiveness in the ship industry between Korea and USA is not market share, not labor cost. Furthermore, the limitation scope in this research is that needs additional research as how researcher finds out production volume and export amount from 2 country's subsidiary and affiliated companies in the world. For example, in case one of Korean ship building companies goes to a certain foreign country(vietnam) for set up ship manufacturing plant and has huge volume of production to export them to Korea. In this case, contrarily, these export volumes will be regarded Vietnamese export volumes instead of Korean export amount even if all of productions are coming from Korean ship building company located in Vietnam. It is one of crucial limitation to overcome as no other Korean ship manufacturing companies reluctantly provide information of their exact outcome and export amount according to their business sales secret.



## References

- Ahn S. W. (2016). economic union and development on low-cost aircraft industry network. *The Journal of Contemporary European Studies*, 34(1), 287-308.
- Balassa, B. (1965). Trade liberalization and revealed comparative advantage. *Manchester School of Economic and Social Studies*, 33(0), 99-123.
- Chang, M. S. (2016). Trade competitiveness between Korea and Germany. *Koreanische Zeitschrift fuer Wirtschaftswissenschaften*, 34(4), 275-298.
- Choi, Y. J., & Li, J. E. (2016). trade pattern among Myanmar and Korea-China-Japan. *International Area Studies Review*, 20(4), 3-22.
- Ding, H., & Rhee, H. K. (2016). international competitiveness about automobile industry between Korea and China. *Korean-Chinese Social Science Studies*, 41(0), 83-107.
- Gabriele, O. (2017). Market building through regional integration agreements: The EU and the Asean Way. *Journal of Economic Integration*, 32(1), 160-192.
- Hong, S. L., & Son, J. S. (2017). export competitiveness between Korea and Japan in the Asian market. *The Korean-Japanese Journal of Economics & Management Studies*, 75(0), 75-97.
- Kim, Y. K. (2016). EU gas market liberalization and EU's energy strategy change against Russia. *The Journal of Contemporary European Studies*, 34(4), 33-67.
- Kim, S. M., J, E. C., Choi, .Y., & Han, S. O. (2016). marketing mix strategy how seasoned laver enters into Chinese market. *The Journal of Korean Island*, 28(4), 35-58.
- Ku, K. B., Park, C. S., & Dou, X. X. (2016). how to set up specialization strategy and agricultural products trade status between Korea and China. *The Journal of Modern China Studies*, 18(3), 35-64.
- Lee, J. H., & Byun, H. S. (2016). competition in product market and enterprise's risk chase. *The Korean Journal of Finance Association*, 29(1), 37-75.
- Lee, J. (2017). structural characteristic and competitiveness change in cosmetic industry among Korea, China and Japan. *The Korean-Japanese Journal of Economics & Management Studies*, 75(0), 129-153.
- Lee, J. G. (2016). current status on Knowledge-based service industry and international comparison of export competitiveness. *Hyundai Research Institute*, 671(0), 1-17.
- Nam, S. J., & Cho, Y. R. (2016). economic effectiveness of Korea-China FTA which focus on influence to import & export for manufacturing companies in Chungnam area. *The Journal of Modern China Studies*, 18(1), 73-119.
- Roger, W., & David, B. (2015). Comparing advantages: US trade with the rest of the world, 1968~2008.
- Uncomtrade (2017). *2012 Annual Statistics Reports*. NewYork, USA. Retrieved November 21, 2016, from <http://comtrade.un.org/>