Social Big Data Analysis on the Perception of ASEAN in Korea

국내 아세안 인식 조사를 위한 소셜 빅데이터 분석



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Foreword

The year 2018 opened a new horizon for ASEAN-Korea relations. With the Korean government's announcement of the 'New Southern Policy', which aims to bring relations with ASEAN equal to that of relations with the four major powers, the relationship between ASEAN and Korea became one of the priorities of Korean diplomacy.

At such a time when a new phase in ASEAN-Korea relations is about to begin, how is the perception of Korean people towards ASEAN transforming? To systematically analyze Koreans' perception of ASEAN and Southeast Asia, and to utilize the results as guide to further develop ASEAN-Korea relations, the ASEAN-Korea Centre presents to you **<Social Big Data Analysis on the Perception of ASEAN in Korea>**.

<Mutual Perceptions of ASEAN and Korean Youth> published by the Centre in November of 2017 was a research done on the 'mutual perception' of the 'youth' of ASEAN and Korea. As a sequel to this previous study, <Social Big Data Analysis on the Perception of ASEAN in Korea> aims to expand the scope of this research to include a larger segment of the Korean demographic by utilizing big data from the 'web' and 'social media' platforms. Using texts found on both channels, we have analyzed keywords-related to ASEAN and Southeast Asia that Koreans have used over the past five years. Further, we observed changes in the usage of these keywords, noticed trends in perception towards ASEAN, drew out verbs in the texts, and analyzed positive and negative opinions on ASEAN and Southeast Asia. Through this social big data analysis, we obtained encouraging results for the future of ASEAN-Korea relations: Koreans generally have a positive perception of ASEAN, the partnership between ASEAN and KOREA – especially in the area of economic cooperation – is developing in mutually beneficial ways, and there is continuous cultural exchange in terms of socio-cultural cooperation.

ASEAN and Korea are co-prospering partners seeking mutual interest and balance in the long-run through cooperation in political, economic, social, and cultural areas. To sustain and further grow this genuine and long-lasting partnership, the ASEAN-Korea Centre will continue to conduct research to better understand the perceptions of both ASEAN and Korean people. In doing so, the ASEAN-Korea Centre will be able to conduct more effective programs to help interlink the governments, civil societies, and peoples of ASEAN and Korea.

Joury & Kin

Kim Young-sun Secretary General of ASEAN-Korea Centre



Purpose and Methodology of Social Big Data Analysis



1. Purpose and Methodology of Social Big Data Analysis

1.1. Background and Purpose

This analysis provides a perspective on Koreans' perception of ASEAN (Association of Southeast Asian Nations) and-related issues by examining text-based big data generated on relevant web and social network services in relation with ASEAN over the past five years. ASEAN is an important partner to Korea as it is the second largest trading partner of Korea. The region is also home to around 520 thousand ASEAN migrants in Korea, equivalent to 24% of 2.14 million foreigners, and the number is rapidly growing every year. (Immigration·Foreigner Policy Statistics of December 2017, Ministry of Justice).

With this backdrop, ASEAN and Korea have successfully expanded their cooperation to various areas such as trade and investment as well as socio-culture. But in order to establish a genuine and sustainable partnership, it is critical to understand how Koreans perceive ASEAN. The main objective of this research is to find out the perception of ASEAN among Korean public thorough social texts. It also aims to shed light on the four major areas of the ASEAN-Korea cooperation and serve as basis for future-oriented measures to further enhance the mutually beneficial partnership between ASEAN and Korea.

1.2. Methodology

Smart Insight, a social big data analysis platform of SK Telecommunications, was utilized for data collection and analysis. Texts including the target keywords Southeast Asia, ASEAN, and Association of Southeast Asian Nations were collected from the web and social media. The period from which the texts were obtained was from November 2012 to October 2017.

Before fully analyzing the social text big data, a preliminary research on the text volume and contents written by Koreans was conducted by searching the keyword "ASEAN" on Korean portal sites. Some of the key findings from the preliminary research are as follows:

• ASEAN is comprehended as the regional cooperation body of 10 Southeast Asian countries.

- Koreans' perception of ASEAN is relatively weaker than that of Southeast Asia. (Hence, to allow easier access to relevant information and compare the understanding of the two terms, both "Southeast Asia" and "ASEAN" were utilized as keywords.)
- About 75% of the texts referring to ASEAN mentioned the relationship between ASEAN and Korea.

Analysis on texts about cooperation between ASEAN and Korea indicated that they were most closely-related in terms of politics, economy, tourism, and socio-culture.

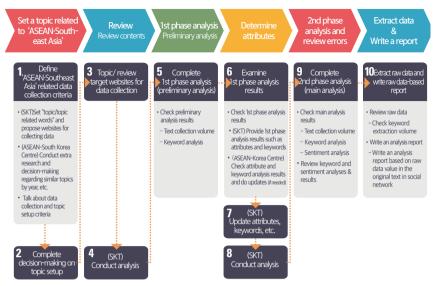
Based on the result, the main research was devised. Texts including the target keywords, Southeast Asia, ASEAN, and Association of Southeast Asian Nations, were collected from the web and social media. These texts were analyzed using Smart Insight's basic functions: buzz trend analysis, keyword frequency analysis, and a sentiment analysis.

- **Buzz trend analysis** analyzes text trends including increases/decreases in the volume of all collected texts by period (daily/monthly/annually).
- **Keyword frequency analysis** can be classified into two types. One is *keywords ranking analysis*, which is a comprehensive analysis method that lists noun keywords that appeared along with the target keyword in the order of frequency. It is useful in identifying the list of the most frequently searched keywords and their trends. The other is *keyword network analysis*, which is a more selective analysis method. It extracts other keywords-related to the target keyword for detailed identification of issues and content analysis.
- Sentiment analysis extracts verbs and adjectives in the collected texts and analyzes positive and negative opinions.

To carry out the analysis, texts-related to the subject areas from the superordinate concept "Southeast Asia" to "ASEAN" and "ASEAN-Korea" were gathered. A keyword dictionary and a sentiment dictionary that are relevant to the collected texts were then created. Based on these dictionaries, raw data of structured keywords was extracted and analyzed.

The process and works done in each stage of analysis are as follows.

[Diagram 1 Analysis Process]



1.3. Scope of Analysis

279 websites were accessed to collect data for the analysis. These consist of 257 media channels and major social media, blogs, cafes, online boards, and online communities. The websites from which the data was collected are shown in [Table 1].

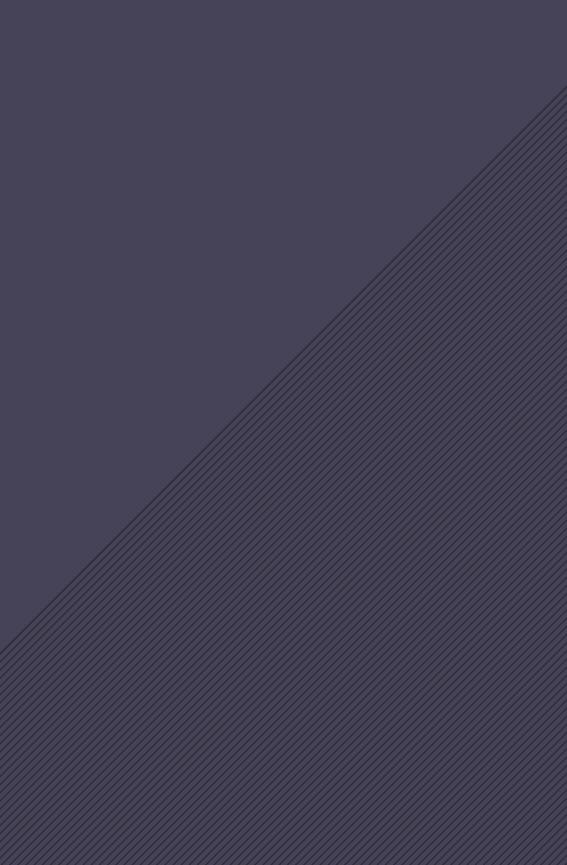
Channels	Websites	
News	257 online news sites (Chosun Ilbo, Joongang Ilbo, Dong-A Ilbo, Hankyoreh, Kyunghyang Shinmun, Yonhap News Agency, etc.)	
Cafes	Naver cafes, Daum cafes	
Social Media ¹	Twitter	
Blogs	Naver blogs, Daum blogs, Egloos, Tistory	
Online Boards	MLBPARK_BULLPAN, YouTube, Naver Knowledge-IN, Nate Talk, Daum TIP, Daum Miz Net_Daily Episodes, Thisisgame-Community/Free Bulletin Board, dcinside_Gallery, Ruliweb-Community society/politics/economy information, beautypl, Ppomppu, Cetizen, Seeko_Small Gear Board, Today's Humor, Inven	

[Table 1 Accessed Websites for Data Collection]

To collect information about Koreans' perception of ASEAN, Southeast Asia, ASEAN-Korea relations, and the ASEAN-Korea Centre through the listed websites in [Table 1], a dictionary of-related terms was created. Contents-related to the terms were with respect to the 4 major areas of cooperation between ASEAN and Korea, namely Political, Economic, Tourism, and Socio-cultural aspects.

¹ The social media was limited to Twitter due to limitations in collecting data from Facebook and Instagram.

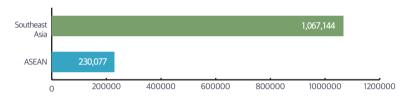
Results and Implications



2. Results and Implications

2.1. Comparison of Perception: Southeast Asia and ASEAN

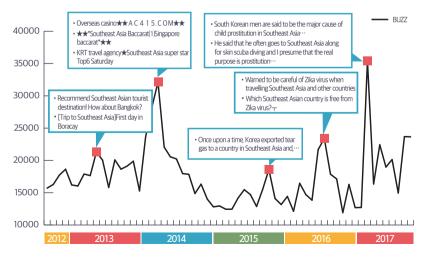
To figure out Koreans' perception of ASEAN, their perception of Southeast Asia, which is frequently used by the public when referring to ASEAN Member States, was examined as well. The result showed that there was a wide gap between the volume of Southeast Asia- and ASEAN-related texts generated within social texts. The volume of texts-related to "Southeast Asia" was 4.5 times larger than that of "ASEAN", which indicates that the nation's perception of ASEAN is relatively weaker than that of Southeast Asia and that people tend to perceive ASEAN as a community of parties (specific agencies, groups, persons, etc.)-related to ASEAN.



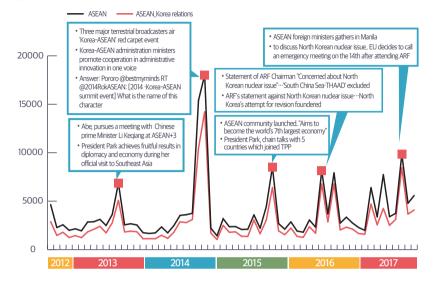
[Graph 1 Gap between the Volume of Texts-related to Southeast Asia and ASEAN]

For "Southeast Asia," a total of 1,067,144 texts, or an annual average of 180,000 texts, were generated over the last five years. These texts contained a massive volume of reviews of national landmarks, tourist sites, and food of Southeast Asia. Based on the analysis, the volume of texts surged particularly at the time when Southeast-



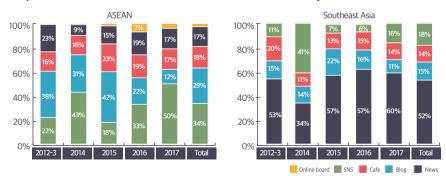


Asia-related issues such as adult entertainment, wars and weapons, Zika virus, or prostitution arose.



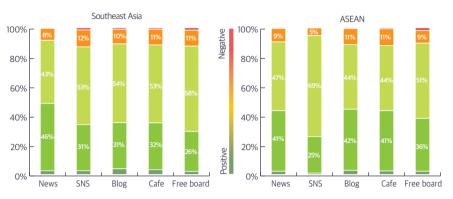
[Graph 3 Annual Social Trend: ASEAN]

There were also differences in the trend among channels from where texts-related to "Southeast Asia" and "ASEAN" were obtained. For "Southeast Asia", 63% of texts were produced through social media and blog channels, which are based on individual accounts of people, whereas for "ASEAN", 53% were generated through news, which is a mass media channel. This maybe because Koreans are more familiar with "Southeast Asia," hence they frequently mentioned the keyword in their individual social networking space. For ASEAN, however, results were found in the mass media, which is deemed effective in terms of exposure but have limitations in terms of coevolution of discourse.



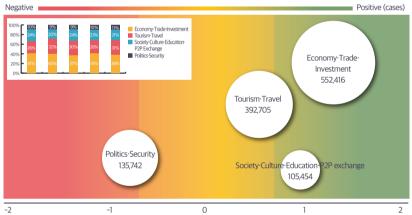
[Graph 4 Share of Texts-related to "Southeast Asia" and "ASEAN" by Channel]

The share of positive and negative texts-related to Southeast Asia and ASEAN was examined per channel. "Southeast Asia" keyword generated approximately 50% of positive keywords on news websites, followed by 35% on blogs and cafes. As for "ASEAN," the share of positive texts was the highest for blogs at 45%, followed by 43% for the news websites.





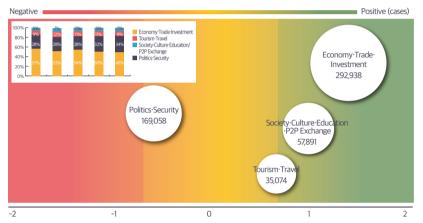
[Graph 6 Positioning Map by Major Areas: Southeast Asia]



*Positioning map = Derived average value of positive and negative texts by each area, based on five-point scale (very negative/negative/neutral/positive/very positive)

The data generated by the searching the keywords was also classified into 4 areas of cooperation between ASEAN and Korea. It turned out that the percentage of contents-related to "Southeast Asia" turned out to fall under economy(39%), tourism(28%), politics(23%), and culture(10%) on an annual average. For "ASEAN," the analysis showed economy(53%), politics(30%), tourism(10%), and culture(6%) on an annual average. In addition, most of the texts-related to the Southeast Asia and ASEAN

subjects turned out to be positive. Majority of positive texts-related to "Southeast Asia" and "ASEAN" mainly referred to the tourism industry, e.g. promotion of the domestic tourism industry based on the strength of the popularity of the Korean Wave, invigorating measures to attract more Southeast Asian tourists, and various efforts of the Seoul Metropolitan Government to diversify the domestic tourism market. On the other hand, the texts-related to politics were somewhat negative due. This is due to the political concerns in the region such as the North Korean nuclear issue as well as wars and disputes.



[Graph 7 Positioning Map by Major Areas: ASEAN]

*Positioning map=Derived average value of negative and positive texts by area, based on a five-point scale (very negative/negative/neutral/positive/very positive)

As mentioned above, the keyword "Southeast Asia" generated diverse opinions regarding the tourism industry. The share of positive texts was mostly centered around improving tourism services such as installation of prayer rooms and opening of halal food shops to attract more Muslim tourists from Southeast Asia and the Middle East which account for 23% (1.6 billion people) of the global population. On the other hand, negatives texts were generally about expensive tour packages offered to Southeast Asian tourists as well as the small number of accommodations such as hotels and guesthouses vis-à-vis the large number of tourists coming from the region. It was also found that the Korean government proposed some measures to resolve these issues such as revising relevant policies as well as providing various types of accommodation.

As for results-related to "ASEAN," most of the positive texts were about ASEAN-Korearelated events held consistently on an annual basis including the 2014 ASEAN-Korea Summit, culinary festival, photo exhibition, book concerts, lecture series, cultural events commemorating the 50th anniversary of ASEAN in 2017, and other programs organized by the ASEAN-Korea Centre. Many reviews on Korean and ASEAN food appeared on blogsites, indicating that the events gained popularity for giving people a chance to experience each country's unique food culture and discover their new personal tastes.

To compare the and contrast the perception of Southeast Asia and ASEAN more systematically, texts were classified into four major areas: 1) Politics·Security; 2) Economy·Trade·Investment; 3) tourism·travel; and 4) society·culture·education·people-to-people exchanges. In short, similarities and differences were noted via keywords ranking, major issues, and sentiment analyses in four areas.

2.1.1. Keywords Ranking Analysis²

Comprehensive approach-based research

[Table 2 Keywords Ranking Analysis: Politics Security]

Southeast Asia-related	Common	ASEAN-related
War	Government	Security
State Department	President	Commemorative Summit
Colony	Korean Peninsula	Toward North Korea
Terror	Summit	APEC
Military	Summit meeting	ARF
Chinese Government	THAAD	ASEAN Regional Forum
Tear gas	Missile	Provocation
Retaliation	East Asia	THAAD deployment
Lives	Reunification	Kim Jong Un
Weapon	Xi Jinping	North Korean nuclear issue

Politics·Security

Keywords that commonly appeared when Southeast Asia and ASEAN were searched were government, president, the Korean Peninsula, summit conference, summit, reunification, missile, THAAD, and the Chinese President Xi Jinping. This implies that: 1) the leaders of Southeast Asian countries and ASEAN support peace and denuclearization on the Korean Peninsula; 2) there are increasing views that Korea should no longer depend too much on the Chinese market, given its dispute with China on the THAAD deployment and the Chinese economic retaliation; and 3) texts where Southeast Asia, ASEAN, Korea, and China were mentioned altogether in relation to those issues were produced constantly.

² Comparison of top 10 keywords which most frequently appeared in researches-related to Southeast Asia and ASEAN. Refer to [Tables 15-22] in Appendix for further information.

Also, some differences were discovered in the keywords. Keywords that appear in the Southeast Asia-related research were war, colony, lives, military, weapon, tear gas, mass destruction, the State Department, and others. This implies that people shared information about the history of Southeast Asian countries, struggles against despotism, continuous threats posed on Southeast Asian countries by the Syrian civil war as well as terrorist actions of IS, and information about-related weapons that have become an issue in Korea. Regarding the Chinese government and retaliation keywords, the most frequently mentioned items were the Chinese government's position on the THAAD and acceleration of Korean companies' expansion into the Southeast Asian market.

On the other hand, ARF (ASEAN Regional Forum), APEC(Asia-Pacific Ecomonic Cooperation), ASEAN-Republic of Korea Commemorative Summit, and G20 frequently appeared in the ASEAN-related research, indicating that people were highly interested in the agendas news discussed in international fora, e.g. development of ASEAN community and summit of global-leading countries. Also, keywords that most frequently appeared in the ASEAN-related research included inter-Korean, North Korean nuclear issue, provocation, Kim Jung Un, and security, which seemed to reflect ASEAN members' concerns about nuclear development by North Korean leader Kim Jung Un and North Korean nuclear provocation as well as cooperation between ASEAN and Korea in the aspect of international security.

Southeast Asia-related ASEAN-related Common Financials FTA Company Sales Infra Export Free Trade Association System Market entrance Trade Consumption Investment Resource Development GDP Facilities Brand Economic cooperation TPP Samyang Import Naver Population RCEP Plant Automobiles APEC Facebook Industry Commerce

[Table 3 Keywords Ranking Analysis: Economy Trade Investment]

Economy · Trade · Investment

Market entrance, export-import, investment, automobiles, brands, population were the keywords commonly mentioned in Southeast Asia and ASEAN-related searches. This indicates that increasing number of Korean businesses are entering ASEAN countries, whose total population is the third largest in the world, and that Korean automobile and cosmetics industries are especially gaining attention.

Southeast Asia-related searches indicated that Korea's export to Southeast Asia, which used to be automobiles, have now transformed and expanded further to game and food industries. The ASEAN-related searches constantly revealed high interest in the trade volume increase resulting from the signing of the ASEAN-Korea FTA(Free Trade Agreement) as well as rebuilding old infrastructure in ASEAN countries.

[Table 4 Keywords Ranking Analysis: Tourism·Travel]

Southeast Asia-related	Common	ASEAN-related
Southeast Asia travel	Hotel	Official visit
Tour	Automobiles	Commemoration
Shopping	Airplane	Vessel
Special price air ticket	Tourist	Train
Review	Air ticket	Flight
package	Accommodation	Aviation
Memories	Plane	Car
Prostitution	Bus	Express train
Adult entertainment spot	Korean air	Subway
Pornography	Vehicle	Visa

Tourism·**Travel**

Accommodation, transportation, tourist were the keywords commonly mentioned in both Southeast Asia and ASEAN-related searches. In fact, majority of Southeast Asiarelated texts centered around reviews of travel to Southeast Asian countries and information-sharing. Perception of cheap price and local food of Southeast Asia was very positive. On the contrary, the perception of some Koreans traveling to Southeast Asia for gambling or prostitution were quite negative specially on social media channels.

In ASEAN-related searches, official visit, vessel, train were the frequent keywords. In fact, most of the texts were about the visit of the Korean president or envoy to ASEAN instead of travel reviews of the public. The vessel and train keywords here do not refer to transportation but to the industries with respect to trade and investments for rebuilding outdated infrastructure in the ASEAN region.

Southeast Asia-related	Common	ASEAN-related
Cooking Fruits Coffee Hot taste Hot and spicy curry chicken fried noodle Songs Olympic Games Translation Beer Restaurants	Culture History Food Education Movie Tradition Event Korean wave Groceries Game	Exchange Forum ASEAN Film Festival Performance Seminar Exhibition Food festivals Festival International tourism fair Free admission

[Table 5 Keywords Ranking Analysis: Society Culture Education People-to-people Exchanges]

Society-Culture-Education-People-to-people Exchanges

The commonly mentioned keywords in Southeast Asia and ASEAN-related searches were food, culture, history, tradition, Korean Wave, movie, game, and education, which implies that Koreans have interest in various cultural exchanges with ASEAN. Koreans especially turned out to have favorable views on traditional food of Southeast Asian countries. The demand increase of Hot and Spicy Curry Chicken Fried Noodle, a Korean product that became a hit among Southeast Asians, was mentioned frequently on social media. Korean celebrities' meeting with Southeast Asian fans and cultural exchanges were mentioned often as well.

The notable keywords in the ASEAN-related searches were "ASEAN Film Festival, culinary festivals, and international tourism fair." In particular, the ASEAN Film Festival held in 2014 seemed to appeal much to the public as it provided a chance to indirectly promote local atmosphere of ASEAN countries to Koreans through films. Also, there were positive reviews about giving free tickets to those who made prior registration to ASEAN culinary festival.

2.1.2. Major Issues Analysis³

Selective approach-based research

We examined Southeast Asia- and ASEAN-related issues that made headlines, drawing the attention of many Koreans.



[Diagram 2 Keyword Network Analysis: Politics Security]

Politics·Security

Companion, trust, peace, the Korean Peninsula, and denuclearization were the keywords commonly mentioned in the Southeast Asia and ASEAN-related searches. This reflects that Koreans usually hear about the ASEAN-Korea relations and other world events through news reports. This also mirrors that ASEAN is getting much more attention specially that the Korean President officially referred to ASEAN as Korea's trustworthy partner and carried out talks with ASEAN countries to promote South Korean-led denuclearization and peace on the Korean Peninsula.

[Diagram 3 Top Producers of Texts-related to ASEAN by Year]

2012 2013	2014	2015	2016	2017
rder Channel Website Total no.	Order Channel Website Total no. of texts	Order Offician Channel Website Totla no. of texts	Order Mannel Website Total no. of texts	Ordersteiner Channel Website Total n
1 Yonha p News Yonhap News 2157 Agency	1 Yonha P News News 1949 Agency	1 Yonha p News Yonhap News 2052 Agency	1 Yonha News Yonhap 2690	1 Yonha News News 2467 P Agency
2 Newsi News Newsis 1081	2 Newsi News Newsis 1230	2 Newsi. News Newsis 1028	2 News Newsis 1239	2 News News 1 1431
3 Fi News Financial 732	Asia 3 Asi., News Economy 703	3 New., News News1 909	3 News. News News 1 1124	3 Newsi News Newsis 1163
4 Mone News Money 642	Daily	4 Fi News Financial 736	4 News Today 738	4 Mone News Money 779
5 News News1 609	4 News. News News1 682	5 Edai News edaily 661	5 Fi News News 660 Mareil	5 Fi News Financial 705
6 yt News ytn 592	Money News Money cod	5 Asi News Economy 661	6 Maeil. News Business 612 Newspaper	6 Asi News Economy 694
7 Korea. News Economic 586	7 Edai News edaily 570	7 Money News Today 585	7 Edai News edaily 604	7 Edai News edaily 635
			34 ak Blog NaverBlog 164	
13 cu BLog Naver Blog 359	14 ch Cafe Naver Cafe 393	15 ch Cafe Naver Cafe 347	39 ht. Blog Naver Blog 138	20 zu Blog Naver Blog 299
21 da Blog Naver Blog 238	15 bo SNS Twitter 372	18 Lao Cafe Daum Cafe 277		36 Poro Cafe Daum Cafe 146
News SSEAN-Korea Centre, luncheon meeting with ASEAN ambassadors to Korea Nov aoricultural and diary product exports drog 4%to 5. biblion dollars in the order of Hona Kong (21.9%)export amount increased	News President Park's arretina President Park's addressina at the function meetina of Acoustic Common and Acoustic Commonations Common and Common and Acoustic In APEC House Korea-China-Japan ASEAN Centre Secretary General attends ASEAN Tourism Forum	News MSS, announces to support opened, sociation, Jahrs to to support ASEAN more entrance "Expansion of science and technology, diolomocy and export of Creative Economy model shined this year? Pursuing establishment of a joint upmure in contents and outputs end shine that and countries, etc. Into this	News Korea indonesia foreian minister share serious concerna about North Korean nuclear soure and decide to cooperate closely Blog Urres APEC's strong action against protectionism_2016 APEC cabinet meeting	News Examined North Korean nuclear issue, security issues in Northeast Asia, etc. and discussed measures for Korea- ASEAN cooperation Korean foreign minister Kang Kungawha also asked for support to Indonesian foreign minister at the last ARF

3 Keywords-related to major issues were compared after eliminating overlapping words from the top 200 keyword list mentioned simultaneously with keyword of each area in the Southeast Asia and ASEAN-related researches. Refer to [Diagrams 10-17] in Appendix.

There were differences between the biggest issues in the Politics-Security area-related to Southeast Asia and ASEAN. The biggest issue concerning Southeast Asia was about the restrictions in performance of Korean celebrities who entered the Southeast Asian market due to political reasons, which aroused sympathy on social media. Democratic general election in Myanmar and China's THAAD retaliation were popular as well. ASEAN, on the other hand, had issues tied to diplomatic activities in East Asia, disputes over territorial sovereignty of the South China Sea, implications of Brexit on ASEAN, and ASEAN-related columns, having gained public attention on news coverage.



[Diagram 4 Keyword Network Analysis: Economy Trade Investment]

Economy · Trade · Investment

ASEAN-Korea FTA, Asian Infrastructure Investment Bank (AIIB), and infrastructure were among the frequently mentioned keywords-related to Southeast Asia and ASEAN in the areas of Economy·Trade·Investment. This suggest that there is interest in investing in outdated infrastructure in ASEAN countries through establishment of China-led AIIB against the World Bank and Asian Development Bank.

Regarding Southeast Asia, a decrease in Chinese tourists in Korea due to the THAAD deployment dispute and its grave impacts on distribution and tourism industries as well as an increase in Southeast Asian tourists were major issues.

As for ASEAN, Koreans turned out to be interested in the THAAD deployment dispute with China as also shown in the Southeast Asia-related search, hard-hit domestic companies turning their eyes to the ASEAN market instead, promotion of exports and investment attraction by small and medium enterprises, and support and cooperation for creating jobs to promote overseas employment.

[Diagram 5 Keyword Network Analysis: Tourism·Travel]



Tourism·**Travel**

THAAD and tourists were seen as the most common keywords. The continuous efforts of domestic duty free and cosmetics industries were specifically highlighted as there is a need for Korea to attract more tourists from ASEAN and Middle East due to China's economic retaliation in response to the deployment of THAAD.

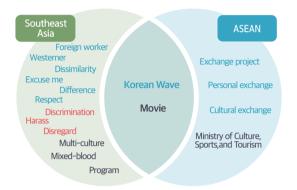
Regarding Southeast Asia, three countries - Thailand, Vietnam, and the Philippines were frequently mentioned as top keywords over the five years, affirming that these countries were the tourist destinations preferred by Koreans. Thailand was popular as a satisfactory vacation spot in terms of travel costs. In 2016, however, negative texts particularly surged due to the spread of Zika virus. As for Vietnam, there were many positive views regarding famous restaurants and landmarks, with Da Nang, Ho Chi Minh, and Hanoi being continuously referred to as the top three tourist destinations. There were many positive reviews about trips to the Philippines including Cebu and Boracay, but negative opinions also emerged as the fact that the real fathers of most Kopinos(Korean Filipinos) were Korean tourists or students studying in the Philippines.

In the ASEAN-related searches, specific countries were not mentioned as issue keywords. Instead, keywords such as expand exchanges, exchange and cooperation, activate tourism, familiarization tour, Park Won-soon, and Seoul Metropolitan City appeared more often, all of which were-related to promoting tourism exchanges between ASEAN and Korea. Texts also indicated that companies and local governments were devoted to promoting tourism exchanges with ASEAN nations and diversifying the tourism market, e.g. Korean cosmetics companies conducting familiarization tours to attract foreign tourists, and Park Won-soon, the Mayor of Seoul, paying an official visit

to Southeast Asian countries to revitalize tourism in the Seoul Metropolitan City.

It was also found that ASEAN was perceived more as a regional community for development of the tourism industry by the government and companies than a tourist destination. It seems desirable to find ways to raise the level of perception of ASEAN so that the public can feel more familiar with it as a tourist destination rather than merely a regional community or an economic cooperation body.

[Diagram 6 Keyword Network Analysis: Society Culture Education People-to-people Exchanges]

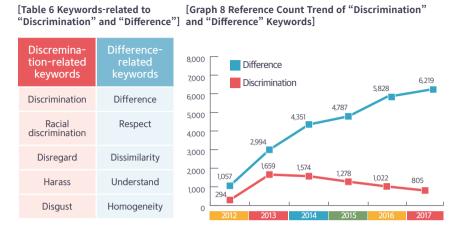


Society-Culture-Education-People-to-people Exchanges

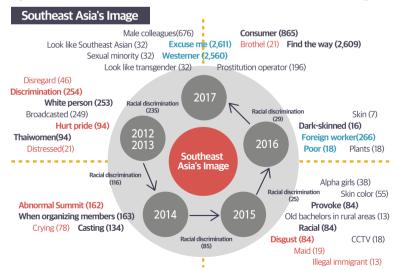
Korean Wave was mentioned frequently in both Southeast Asia- and ASEAN-related searches. It seems possible that Korean contents will continuously spread in Southeast Asian countries, given the popularity of Korean Wave, and that such cultural exchanges between Korea and Southeast Asian countries will create substantial economic value.

It is notable that racial discrimination only occurred in the Southeast Asia-related searches. This indicates that people have prejudice against Southeast Asian people. However, as shown in [Graph 8], that texts-related to "racial discrimination" were frequently mentioned from 2013 to 2015, whereas those-related to "racial difference" were cited more frequently from 2016 to 2017. In the past, there were texts-related to Koreans' prejudice against Southeast Asians. One example is that there were no Southeast Asian casted in the popular TV program, Non-Summit. On the other hand, recently, there is increasing sympathy for Southeast Asian immigrants in Korea and calls for improving their social treatment and welfare are rising as we can see in the keywords foreign workers, respect, understand, dissimilarity, and difference. This can be interpreted that interest in respect for human rights and equality has risen in this

era of multi-racial society.



ASEAN-related searches confirmed that government agencies like the Ministry of Culture, Sports, and Tourism and companies such as Samsung Electronics and CJ are highly interested in reinforcing system development and content export projects targeting K-Drama, K-Pop, and K-Webtoon. It also revealed that similarities between cultural sentiments of Koreans and Southeast Asians are increasing, given Southeast Asians' openness toward the Korean language and similarities of geographical, social, and cultural factors of Southeast Asia.



[Diagram 7 Keyword Network Analysis on Southeast Asia: Southeast Asia's Image]

* keyword network=rising issue keywords generated after removing overlapping words from the list of top 200 keywords mentioned together with keywords of each attribute

2.1.3. Sentiment Analysis

Sentimental perception-based research

[Table 7 Sentiment Analysis: Politics Security]

Southeast Asia-related	Common	ASEAN-related
Will be reunified Achieve reunification Conclude an agreement Begin a policy Moon Jae-in cooperate Terror occur	Related to THAAD deployment Attend summit Have summit meeting Blue House explain Sign an agreement Leader meet	Sign a treaty Cooperate economy Have dominium Counteract missile Support Korean Peninsula Related to Korean Peninsula Hold bilateral talks Ministry of Foreign Affair's message Hold foreign minister meeting Launch ASEAN Economic Community Adopt joint declaration Attend ASEAN summit Follow pledge Have ARF ahead

Politics·Security

Expressions commonly revealed in Southeast Asia and ASEAN-related searches were signing agreements and forming alliances between Korea and Southeast Asian countries, THAAD dispute with China, and efforts to resolve North Korea-related issues.

In the Southeast Asia-related research, "Moon Jae-in cooperates," a positive expression, appeared consistently, indicating that the Korean President was focusing on forming friendly relationships with Southeast Asian countries in terms of domestic economy and development of a multi-cultural society. On the other hand, negative public opinions like "terror occur" proliferated as well, expressing Koreans concerns about Southeast Asian countries falling under a state of emergency due to a massive terrorist attack in Bangkok, Thailand and a terrorist attack conducted by extreme militant IS in Jakarta, Indonesia.

Expressions like "for the Korean Peninsula" and "related to the Korean Peninsula" were top ranked keywords in the ASEAN-related research, reflecting ASEAN's deep interest in the peace of the Korean Peninsula.

Negative expressions such as "counteract missiles" were also found. It was specifically about ASEAN and Korea making joint efforts to come up with substantial measures to counteract the threats posed by North Korean nuclear weapon and missile capabilities.

[Table 8 Sentiment Analysis: Economy Trade Investment]

Southeast Asia-related	Common	ASEAN-related
Have sales of Increase sales Sharp demand Expand influence Export Sign export Support export Export automobiles Provide services Begin services Build system	Record surplus Develop Support market entrance	Increase export Increase import Expand market Sign FTA Support FTA Settle FTA Sign MOU Must invest Support companies Participate in AIIB Begin economic integration

Economy Trade Investment

"Record surplus" was one of the common expressions in Southeast Asia and ASEANrelated searches, indicating that people were much interested in profits to be generated from mutual economic cooperation between ASEAN and Korea. Interests in creating trade surplus across the industry were high in the Southeast Asia-related research and interests in aggressive activities of ASEAN-Korea economic community and sustainable relationship of coexistence were high in the ASEAN-related research.

As for the Southeast Asia-related research, there were positive expressions-related to direct outcomes of Korea's expansion into the Southeast Asian export market and expansion of economic networks such as "increase sales" and "expand influence".

Regarding the ASEAN-related research, expressions with respect to more specialized economic agreements and communities were mentioned more frequently including "sign a FTA," "sign a MOU," and "economic integration begins".

[Table 9 Sentiment Analysis: Tourism·Travel]

Southeast Asia-related	Common	ASEAN-related
Want to travel Southeast Asial Win casino Go on a trip to Southeast Asia Go on a trip Make a trip Set forth a trip Tour around Ride a taxi Ride a boat Do prostitution Do child pornography	Travel Sightseeing Commemorate Go shopping Take photos	Attract tourists Support tourists Plan a trip to ASEAN Recommend a guidebook Open hotel Go on a vacation Ride a motorcycle

Tourism·**Travel**

There were many expressions-related to travel reviews and personal memories and commemoration both in Southeast Asia and ASEAN-related searches.

As for Southeast Asia, many opinions centering on actual experiences were generated including flights, accommodation reservations, visits to famous restaurants, etc.

In the ASEAN-related research, majority of opinions were about governmental and corporate efforts to activate the tourism industry and some progress made in such aspect. However, expressions about interests in a trip to ASEAN such as "plan to travel to ASEAN countries" and "recommend a guidebook" have been appearing, starting from 2016. This indicates that Koreans' perception of the ASEAN keyword and interest in relevant countries is gradually improving.

[Table 10 Sentiment Analysis: Society·Culture·Education·People-to-people Exchanges]

Southeast Asia-related	Common	ASEAN-related
Suit the taste Have many fruits Like beer Want to eat mangosteen Fruit is peculiar Fruit is delicious Teach Korean Eliminate multi-culture Spread a religion Speak English Study Translate Eat breakfast Have food	Receive education	Lead Korean Wave Represent Korean Wave Hold event for ASEAN Film Festival Establish school

Society-Culture-Education-People-to-people Exchanges

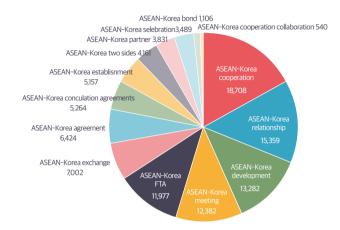
Expressions regarding the necessity of enhancing education on mutual societies, cultures, and languages appeared frequently both in Southeast Asia and ASEAN-related searches. Koreans were positive about relatively cheaper expenses for learning languages and studying in English-speaking countries in Southeast Asia and attracted by their cultures. Moreover, Koreans were seeking for local employment and were also acquiring the native language of the respective country.

In the Southeast Asia-related research, there were expressions such as "peculiar fruit" and "teach Korean language." They were generated from positive responses to tropical fruits produced in Southeast Asia and expressions used by those who teach the Korean language to Southeast Asian Hallyu(Korean Wave) fans, immigrant workers, and others. Positions toward Southeast Asians were separated into those who embrace multi-cultures and others who are against multi-culturalism with somewhat negative perception of some countries with strong impression of extremist religions.

Regarding the ASEAN-related research, expressions such as "lead Korean Wave," "events of the ASEAN Film Festival," and "establish a school" were among the top-ranked keywords. It confirmed that there were texts on the expansion of K-Brand and K-Beauty accelerating the Korean Wave fever and the 2014 ASEAN Film Festival being well-received by the Korean public. Also, establishment of a school in Africa through the funds contributed by Southeast Asian fans of a Korean celebrity was also a hot issue. This confirmed that ASEAN and Korea were already making active exchanges in diverse areas including Korean Wave, movies, and food and maintaining a close social and cultural relationship.

2.2. Perception of ASEAN-Korea Relations

The overall perception of the ASEAN-Korea relations was positive. The shares of texts referring to the ASEAN-Korea relations were the highest for 'ASEAN-Korea cooperation' at 17%, followed by 'ASEAN-Korea relations' at 14%, 'ASEAN-Korea development' at 12%, and 'ASEAN-Korea meeting' and 'ASEAN-Korea FTA' at 11%, respectively.



[Graph 9 Share pf Keywords Frequency-related to ASEAN-Korea Relations]

The most frequently mentioned keywords regarding the existing relationship between ASEAN and Korea were development, Free Trade Agreement, areas, relationship, and bilateral. They were about expectations for mutually beneficial outcomes for ASEAN and Korea such as an increase in exports and economic development on the expansion of the Free Trade Agreement aimed at development of various areas in bilateral and multilateral terms.

Also, top ranking-related search words related to the ASEAN-Korea relations were mostly positive, consistently emphasizing that ASEAN and Korea are optimal/ prosperous partners and companions jointly seeking for multi-level cooperation in economy, society, and culture for long-term balance of benefits, which go beyond trade expansion-oriented exchanges of the past. The result also showed that ASEAN and Korea are in the process of building a future-oriented win-win relationship through genuine communications, aside from material exchanges.

While the North Korean nuclear issue revealed in bilateral texts-related to 'ASEAN and Korea' can be seen as a negative keyword, it also meant that the Korean government

seeks for cooperative measures with ASEAN to resolve the North Korean nuclear issue by focusing on multilateral diplomacy such as the ASEAN+3 (Korea, China, and Japan) Summit, the East Asian Summit, etc.

Text	Realted Keyword	Fre- quency	Text	Realted Keyword	Fre- quency	Text	Realted Keyword	Fre- quency
	Reinforce- ment	7,208		Develop- ment	3,754		Efforts	2,271
① Coop-	Field	6,748	② Rela-	Two coun- tries	3,230	③ Devel-	Field	1,799
eration 18,708	Develop- ment	5,939	tionship 15,359	President	2,969	opment 13,282	Relationship	1,778
cases	Relationship	5,301	cases	Cooperation	2,936	cases	Diverse	1,732
	Discussion	5,257		Park Geun- hye	2,866		Expectation	1,686
	Attend	3,888		Free Trade Agreement	9,402		Development	370
4	Discussion	3,784	(5)	Negotiation	4,149	6 Ex- change 7,002 cases	Mutual	355
Meeting 12,328	Measures	2,747	FTA 11,977	Sign	3,622		ASEAN	336
cases	Emphasis	2,586	cases	Fermenta- tion	3,251		Bilateral	328
	Member nations	2,399		Settlement	3,211		Invite	310
	Measures	666		Negotiation	263		Conver- sational relationship	595
⑦ Consul-	Opportunity	631	8	Fermenta- tion	205) Estab-	25th anniver- sary	583
tation 6,424	Korean Pen- insula	604	Treaty 5,264	Free Trade Agreement	202	lish- ment 5,157	Commemo- ration	357
cases	Opinion	581	cases	Import	193	cases	Partner	285
	Ministry of Foreign Affairs	531		Tariff	193		Tariff	193

[Table 11 Keywords Frequency related to ASEAN-Korea Relations]

	Multi-lateral	291		Optimum	82		Host	158
10	North Korean nuclear issue	240	0	Driving force	78	12	25th anniver- sary	146
Two coun-	Opinion	223	1) Partner	Positive	73	Com- memo-	First time	115
tries 4,161 cases	East Asian summit meeting	204	3,831 cases	Substantiali- ty	67	ration 3,489 cases	Performance	110
	Consultation	201		Promise	64		10 ASEAN nations	101
	Sole	23		Relations	32		Development	13,817
(13)	Jordan	21	(4)	Capital	30	Top 5	Free Trade Agreement	9,604
Collab- oration	5 billion	21	Bond 540	Sincere	30	Related Key-	Field	8,547
1,106 cases	New con- struction	20	cases	Material	30	words	Relationship	7,079
	Eventfulness	20		Future-ori- ented	29		Two coun- tries	6,460

[Graph 10 "Development" Keyword Frequency Trend]



In addition, top 10 keywords by year during the recent five years were examined to identify the trend of Korean's perception of the ASEAN-Korea relations. The "development" keyword, which ranked as the top positive keyword based on the total analysis period, was mentioned increasingly each year and specific contents were as follows:

First, it turned out that ASEAN and Korea were pursuing mutual development in overall areas. There were high expectations for a mutually complementary relationship as partners of common prosperity in economy, drivers of regional peace in Politics Security, and companions for cultural prosperity in society culture.

Second, it was confirmed confirm that ASEAN and Korea have been developing economic trade and cultural exchanges remarkably since the past and were further developing the close relationship by reinforcing bilateral and multilateral ties.

Third, recently, Korean President and key political figures are continuing intensive diplomatic activities for the development of the ASEAN-Korea relations. There were evaluations that development in Korea's relationship with ASEAN, a partner for national prosperity as important as the four neighboring countries around the Korean Peninsula, would continue onwards.

2012,20	13	2014		2015		2016		2017	
Keyword	Freq	Keyword	Freq	Keyword	Freq	Keyword	Freq	Keyword	Freq
Free Trade Agreement	1,978	Free Trade Agreement	2,618	Discussion	2,020	Develop- ment	2,199	Develop- ment	2,713
Develop- ment	1,755	Develop- ment	1,846	Free Trade Agreement	2,198	Expectation	989	Free Trade Agreement	1,449
Relationship	1,201	Partner	1,518	Develop- ment	1,729	Expansion	977	Cooperation	1,409
Expansion	1,146	Strategic	1,430	Promotion	1,483	Promotion	918	Promotion	1,023
Promotion	1,061	Signing	1,257	Field	1,242	Free Trade Agreement	907	Diplomacy	984
Negotiation	960	Expectation	1,120	Participa- tion	1,030	Two coun- tries	821	Founding	904
Discussion	580	Economy	1,046	Negotiation	967	Cooperation	756	Норе	315
Expectation	497	25th anni- versary	675	Growth	440	Potential	704	Important	289
Diverse	497	Conver- sational relationship	558	Diverse	404	Diverse	349	Positive	210
Opinion	258	Important	374	Favorable	104	Consent	164	Continuous	135

[Table 12 Keywords Ranking in ASEAN-Korea Relations by Year]

Aside from "development", which was the most frequently cited positive keyword in terms of the ASEAN-Korea relations over the past five years, the frequency of other positive keywords had different complexion by year as well.

During 2012-2013, there were great interests in measures to expand technology exchange and information sharing among companies of ASEAN and Korea, and

expectations for benefits of the ASEAN-Korea FTA, as shown in the keywords expand and expectation were high.

In 2014, keywords such as companion, strategic, important topped the list, reflecting the will of the leaders of ASEAN and Korea to reinforce the strategic partnership, and the views that the ASEAN-Korea relations, are more important and intimate than the Korea-China relationship.

In 2015, growth and favorable stood out as keywords. The fact that minimization of barriers of trading goods, services, capital, and human resources among ASEAN and Korea countries would possibly accelerate economic growth. Korean Wave has also paved the way for Korean companies to enter the ASEAN market.

In 2016, the keywords expectation, cooperation, and potential indicated that expectations were high for establishment of ASEAN Culture House in Busan in terms of cultural exchanges promoted through the ever-closer relationship between ASEAN and Korea. Also, there were opinions that economic and cultural cooperation with Southeast Asians, who represent a large portion of foreign immigrants in Korea, should be enhanced further. There were many views that it would be possible to take advantage of aging population in China, and ASEAN. by converging IoT, big data, and artificial intelligence with medical services, which are hot topics in Korea.

Lastly, cooperation, establishment, hope, important, aggressive, and continuous were among the frequently mentioned keywords in 2017. There were various contents on reinforcing Korean pharmaceutical companies' cooperation with ASEAN countries in the medicine and medical supplies field and establishing a partnership with ASEAN countries for market entrance by Korean SMEs. Also, the research results revealed that ASEAN and Korea hope for a win-win partnership, through which ASEAN can acquire Korea's economic development know-how and Korea can be actively engaged in diversified and cooperative diplomatic activities with ASEAN.

Meanwhile, to compare the level of interest of Koreans and the level of perception in actual texts, result keywords and-related word search results generated after entering ASEAN in the search box were compared. Major results were as follows.

Related word search results of ASEAN had strong characteristics of entertainment

including ASEAN trips, game, sports, and events, and the keyword group derived from the analysis had the same characteristics of keywords used by experts or distributed by media. Keywords that were commonly included in the related word search group and the analysis result keyword group were information and knowledge-seeking keywords, which were for identifying the definition of ASEAN, ASEAN-Korea, and member countries.

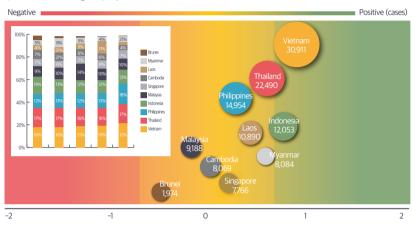


[Diagram 8 Comparative Analysis of ASEAN-related Search Words and Analysis Result Keywords]

*Naver related search words: Keywords most searched for by users; results of analyzing and extracting contents in Naver's Encyclopedia/Knowledge-In/Blog/Cafe, etc. and various keywords

2.3. Perception of ASEAN Member States

The ASEAN market is dubbed 'Post China' and has been gaining global attention for its growth potential. The Korean government has also announced its intention to reinforce its relationship with ASEAN by expanding its trade routes, which were focused on the US and China so far, to further include ASEAN countries.





In line with such international situation, this big data analysis examined sentiment expressions that were the most frequently mentioned in relation to ASEAN countries to figure out Koreans' perception of each ASEAN country.

First, there were the largest number of sentiment expressions-related to economy 'trade·investment in Korea. Most of them involved Korean cosmetics and automobile exports, among other manufacturing industries. Korean cosmetics made a great hit in ASEAN countries including Vietnam, the Philippines, Indonesia, and Malaysia, not to mention Thailand with a flourishing cosmetics market, along with the K-Beauty boom in ASEAN countries.

Korean automobile industry is also gaining a stronger ground in the ASEAN market. Although the size of the ASEAN automobile market is still relatively small, Korean automobile export to the market is expected to grow continuously, boosted by the markdown effect resulting from tariff reductions agreed through the ASEAN-Korea FTA.

^{*}Positioning map =Derived average value of negative and positive texts by area, based on a five-point scale (very negative/negative/negative/neutral/positive/very positive)

Meanwhile, it was confirmed that IS terrorist attacks caused fear among ASEAN people and massive damage, and that issues such as policies toward North Korea and THAAD deployment had an effect on economic activities of ASEAN countries. In response to this, ASEAN countries appeared to be consistently holding ASEAN summit meetings, through which they were seeking measures for economic cooperation and national security.

Tourism-related sentiment expressions appeared frequently as well. Koreans were very much satisfied with cheap prices, nature-friendly environments, and foods including tropical fruits in ASEAN countries. Also, the personality of Southeast Asian people who welcome tourists with pure and kind smiles captured the hearts of Korean tourists. There existed Korean tourists who were dissatisfied with the year-round sultry weather of ASEAN countries and those who wanted to go on a trip to Southeast Asia to escape from the freezingly cold winter days of Korea at the same time.

The ratio of positive and negative perception by ASEAN Member States and features of public opinions are as follows.

Nation (in the order of frequency)	Positive	Negative
Vietnam	 -Korean companies (K-Beauty, automobile, etc.) are seeking to enter the Vietnamese market as continuous growth in economy and domestic market size are capturing attention to this country. -Koreans are satisfied with food and tourist attractions. 	-Anti-human trafficking agreement was signed at the ASEAN summit due to continuous occurrence of human trafficking and measures to promote overseas employment are being sought to overcome the persisting unemployment problem. -Dissatisfaction with dengue fever infection and hot weather while travelling arose.
Thailand	 Thailand is no.1 priority in terms of ASEAN market entrance as it has the largest market size among ASEAN Member States. Korean cosmetics companies are seeking to enter the market with the popularity of K-Beauty. Thailand mania, comparable to Japanese otaku fond of Japanese culture and tour, are increasing due to cheap price and attractive food. Tourists planning for 'Living One Month in Thailand' are increasing. 	 The US is giving pressure on North Korea's economic activities in Thailand to strengthen sanctions on North Korea in relation to nuclear and missile issues. The consumer price is rising rapidly and is relatively high compared to other Southeast Asian countries

[Table 13 Analysis of Major Positive and Negative Public Opinion on 10 ASEAN Member States]

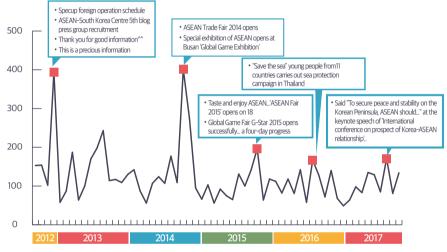
Philippines	 Philippines is gaining attention as an emerging economy with the highest growth rate among ASEAN Member States A variety of exchanges and cooperation with the Philippines are being reinforced (K-Beauty, FinTech, etc.) Koreans are satisfied with nature-friendly environment and cheap price. 	 Tension rose with the US due to drug issues and an increase in Kopinos resulting from engaging in prostitution of Korean students studying in the Philippines. Koreans fear for insects that cannot be seen in Korea like very large cockroaches.
Indonesia	 Indonesia is closely related with economic cooperation, job creation The demand for cosmetics and automobile is increasing in line with the popularity of Korean culture. Koreans are interested in a nature- friendly environment composed of jungle-like forest peculiar to the country. 	 Damage from IS terrorist attack is a fear. The country has many site attractions but not as a tourist destination due to sultry weather and a long flight distance.
Lao PDR	 -Lao PDR is developing in diverse aspects as its economy is growing. -The demand for trip to Laos surged after it appeared in the Korean TV show 'Youth Over Flowers.' -Tourists were very satisfied with friendliness of Lao people and affordable price for traveling. 	 Entrance of Laos market is difficult due to lack of information as the country's presence among ASEAN nations is relatively low to Koreans. There are some criticisms that Lao PDR became commercialized due to a surge in Korean tourists and some opinions that Laos is not suitable as a tourist destination due to socialist ideology and longer-than-expected flight compared to the common knowledge that Southeast Asia is close.
Malaysia	 Malaysia is gaining attention due to its well-established infrastructure and positive views resulting from Korean company's market entrance (K-Beauty, automobile, etc.) Some Koreans are highly satisfied with cheap price and food. Tourists have good impression that diverse races coexist in the country, e.g. Malay, Chinese, Indian, etc. 	 There is a need for seeking measures to deal with rising damage from IS terrorist attack on Southeast Asia. There are some opinions that Malaysia is a bit boring for a tourist destination compared to other ASEAN countries despite plenty of tourist attractions.
Myanmar	 High population and economic growth rate lead to anticipating success in expansion into Myanmar and ultimately growth in the ASEAN market. Koreans are impressed with kind and bright smile of local people, and travel experiences were overall satisfactory. 	 There are concerns about difficulties in entering the Myanmar market due to slow development pace, fierce competition with world powers, and a weak manufacturing infrastructure. Some Koreans are dissatisfied with outdated facilities, consumer price increase, and year-after-year increases in visa issuance fee.

Cambodia	 Cambodia has the lowest GDP among ASEAN Member States, but Cambodian's Happiness Index is relatively high. It is gradually gaining attention due to establishment of transportation infrastructure. Korean tourists are satisfied with cheap price and tourist attractions, such as Tonle Sap Lake, and impressed with pureness of Cambodians. 	 National income is still relatively lower compared to other ASEAN countries, which may make it difficult for Korean companies to create substantial economic value in the local market. Cambodian food is not well known compared to those of other Southeast Asian countries.
Singapore	 Singapore is recognized as one of the countries well-equipped with infrastructure. Although its automobile market is small, it seems to have growth potential. Tourists are quite satisfied with the trip to Singapore due to its unique appeal as a city state with a splendid night view. 	 Halal certification is cumbersome as Singapore does not recognize Korea Muslim Federation (KMF). Too strong sunray makes it hard to go on a tour in the bright afternoon.
Brunei	 Expectation for economic growth is rising as Brunei is rapidly gaining friendly relationship with China. At the same time concerns exist about the country becoming too much dependent on China. Tourists recommended 'Empire Hotel,' one of the world's two seven- star hotels and were satisfied with shows performed in Brunei. 	 Some oppose the Brunei market entrance given overall small market size, administrative uncertainty, and slow growth rate. Many opined that trip to Brunei was somewhat boring due to small country size, small population, and not much attractive as there were problems of overcharging tourists and insufficient public transportation.

2.4. Features of Discourses on ASEAN-Korea Centre's Activities

Texts including the "ASEAN-Korea Centre" keyword generated within social media were examined to set up directions of the ASEAN-Korea Centre's future projects. A total of 7,464 texts, or an annual average of about 1,200 texts, was generated in relation to the ASEAN-Korea Centre. More than half of the contents were distributed by the Centre, followed by 35% through news outlets and 20% via official blogs. The texts distributed by the ASEAN-Korea Centre were mainly concerned with promotion and outcomes of events organized by the Center, including festivals and forums. Among media, Yonhap News Agency generated the most texts-related to the ASEAN-Korea Centre and had the strongest influence.





*Analysis was done after deleting contents related to document destruction of the Park administration as it was not a fact / Total collection/analysis period=Nov 2012~Oct 2017 (Five years in total)

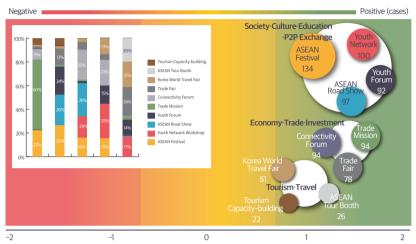
[Diagram 9 Heavy Writers of ASEAN-Korea Centre-related Texts by Year]

20)1	2		2013				2	014				2	015				20)16				20)17	
Orde	200	idano.	Channe	Website	Total no. of texts	Order	C/Hcirum	Channe	É Website	Total no. of texts	Orde	CNice on	Channe	e Website	Tatal no. of texts	Orde	O.N.Sname	Channe	Website	Total no. of texts	Orde	rt.4400000	Channe	Website	Total no of text
1		k	Blog	Naver Blog Yonhap	164	1	Yonha p	News	Yonhap News Agency	170	1	Yonha p	* News	Yonhap News Agency	103	1	Yonha p	News	Yonhap News Agency	219	1	Yonha p	News	Yonhap News Agency	203
2		onha p	News	News Agency	144	2	ak	Blog	Naver Blog	158	2	Newsi	News	Newsis	90	2	ak	Blog	Naver Blog	123	2	ak	Blog	Naver Blog	59
3	N	ewsi	News	Newsis	139	3	Newsi	News	Newsis	124	3	ak	Blog	Naver Blog.	56	3	Newsi	News	Newsis	68	3	Kore	News	Korea Herald	
4	к	ore	News	Korea Herald	43	4	Korea.	News	Korea Economic	50	4	News.	News	News 1	45	4	News.	News	News 1	43	4	Newsi	News	Newsis	28
5		eoul	News	Seoul Shinmun	36				Daily			Korea	News	Korea Economic	29	5	Korea.	News	Korea Economic	32	5	pa	Cafe	Naver Cafe	27
6		u	Blog	Naver Blog	33		Kore		Korea Herald	37				Daily					Daily	32	6	Seoul,	News	Seoul Shinmun	25
			News	Yonhap News	24	6	cu	Blog	Naver Blog Asia	30	6	Kore	News	Korea Herald		6	Kore	News	Korea Herald	26	7	ak	SNS	Twitter	21
		p	news	Agency	2.4	7	Asi	News	Economy	26	7	ep	News	epa Yonhap News	25	7	Seoul.	News	Seoul Shinmun	24				Asia	40
8	6	la	Blog	Naver Blog	24	8	Aiu	News	Daily Aiu News	25				Agency Asia		8	mh	Blog	Naver Blog	23	8	Asi	News	Daily	19
9	4	io	Blog	Naver Blog	21		Maeil.		Maeil		8	Asi	News	Economy Daily	24	9	Maeil.	News	Maeil Business	22	9	Korea.	News	Korea Economic	17
10	¢	h	Cafe	Naver Cafe	18	9		News	Business Newspaper	24	9	Seoul	News	Seoul Shinmun	23	10	Seoul.		Newspaper Seoul Daily	18	10	Fi	News	Daily Financial	16
						10	Seoul.	News	Seoul Shinmun	23	10	Heral.	News	Herald Business	20			News	Seoul Daily	18		- PL	news	News	10
20 for l ar blc Ne AS	EA 13 rec m l og	eva ast Kim repo	Min-9 orter g	nd special on and 201 geol from t group Centre, ho Festival	4 :he	Blog Wh Kor Jun rep	at if " g-wh orter g-wh orter y) Wis	(his' is m Ma a from group	ANLearn (outh Foru imported alaysia? I an the blog I uld go to Ma	<u>to</u> n Lee	AS exc Ina Sec sur	EAN EAN derien ugura retan	culture ice cer al addi y Geni	Show' a mo	L Sung-	Dus Tae Fou On Lar ASI pre cult	AN-H iness kwor indati ine Bo b Jeor AN-H ss gro ture a	agree do Pr on bard ig Mir iorea up wi nd foo	Centre sign ment with omotion h-ho from t Centre's 11 ho loves th od of ten es so much	he th £	AS to mc SN #Ki #Fr Ko	orksho EAN-H De hel nth S abi #1 iday # rea Ce	(orea) d in S Missin Thaila	How to en game man eoul next g the sea nd #ASEAN a	<u>ket'</u>

Facebook channel was not included in this big data analysis, but some people shared the URL of the ASEAN-Korea Centre's events held on Facebook through their personal blogs or online cafes and showed their interests. If those events are held continuously, it will be possible to raise the level of people's perception of the ASEAN-Korea relations.

Year	Order	Title and Contents of Texts	Channel
	1	Director Park Sang-gyun won the bonze prize for his short film in the ASEAN-Korea film festival!!! Please participate~…https://www.Facebook.com/akcsns/app/303561899745219/	Blog
2017	2	Vote for your favorite 'ASEAN month' slogan of ASEAN-Korea Centre (~Feb 20, winner announced on Feb 21) …Short cut to event page: https://www.Facebook.com/akcsns/posts/1445208168845458	Cafe
	3	ASEAN-Korea Centre https://www.Facebook.com/akcsns/ posts/1565210743511866	Blog
	1	ASEAN-Korea Centre's Facebook, Brunei region-based tourism program video voting event (~Sep 11, winner announced on Sep 13… https://www.Facebook.com/akcsns/posts/1254690347897242	Cafe
2016	2	ASEAN-Korea Centre's Facebook, ASEAN home stay video voting event (~Jan 15, winner announced on Jan 22) …Shortcut to event page: https:// www.Facebook.com/akcsns/posts/1092434404122838	Blog
	3	ASEAN-Korea Centre's Facebook, Leave a message of expectation for MBC's special documentary 'Amazing ASEAN' (~Apr 4, winner announced on Apr 7)… Facebook main page: https://www.Facebook.com/akcsns	Cafe
2015	1	[International organization ASEAN-Korea Centre] Recruitment of the 9th undergraduate/graduate blog press group…〇 Blog: http://blog.naver. com/akcsns 〇 Facebook: https://www.Facebook.com/akcsns 〇 Twitter: https://twitter.com/akcsns	Blog
	2	[ASEAN-Korea Centre] Chosen as ASEAN-Korea Centre's 10th blog press group! …also in my blog…https://www.ASEANkorea.org/index.asp https:// www.Facebook.com/akcsns	Blog
	1	Inviting 200 participants to ASEAN-Korea Youth Forum in the order of application! I am Son Whui-joo of ASEAN-Korea Centre's blog press group···Many more substantial news are waiting in ASEAN-Korea Centre's Facebook ···	Blog
2014	2	ASEAN's gem exhibition will run until this Sunday…Get information on events and exhibitions through Facebook! …>>https://www.Facebook. com/akcsns	Blog
	3	Visit following sites for information! Homepage: www.ASEANkorea.org Facebook: www.Facebook.com/akcsns Blog: blog.naver.com/akcsns	Blog
2013	1	'Bravo! ASEAN In Korea 2013' Poster download & review event …https:// www.Facebook.com/akcsns How to apply and captured image of prizes:	Blog
2012	2	Starbucks gifticon to 30 participants who shared 'Bravo! ASEAN in Korea 2013' posts from ASEAN-Korea Centre's Facebook and received the highest 'like' hits …	News

Projects organized by the ASEAN-Korea Centre could be largely broken into three areas: 60% were-related to culture, 32% to economy, and 8% to tourism. Contents about those projects were being circulated through news reports and Koreans' perception of them was mostly positive in all three areas.



[Graph 13 Positioning Map by ASEAN-Korea Centre's Progress]

*Positioning map=Derived average value of negative and positive texts by area, based on a five-point scale (very negative/negative/neutral/positive/very positive)

It can be interpreted that projects with the 'Society-Culture-Education-People-topeople Exchanges' attribute were mentioned the most including "ASEAN Festival," "ASEAN Road Show," "ASEAN Film Festival," "ASEAN Culinary Festival," "Youth Network Workshop," and "Youth Forum" because they involved many interesting factors and events centering on things to enjoy, see, and eat, which have low entry barrier. The fact that the "ASEAN Festival", which featured traditional performances of each ASEAN country, especially drew consistent attention from Koreans, indicates that it would be necessary to develop relevant contents continuously.

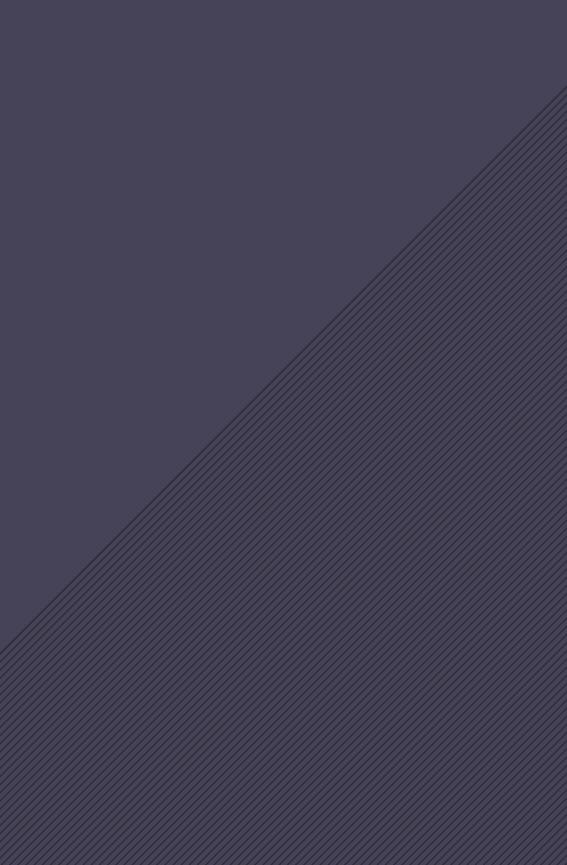
As for the 'Economy-Trade-Investment' attribute, there were many projects-related to the ASEAN market and investments including "Connectivity Forum," "Investment Missions," "Market Research Mission," but projects-related to food trade were mentioned more frequently including "Trade Mission," and "Trade Fair."

Projects-related to the 'tourism travel' attribute is increasing, but they were mentioned far fewer times than those-related to culture and economy attributes, testifying about a need for pursuing and promoting experience-type projects that can raise the public's

interest in ASEAN countries. Also, efforts should be made to expand the 'tour specialist nurturing program' which is carried out in the Philippines, Indonesia, Brunei, and Thailand, as it is a project for enhancing convenience of Korean tourists to ASEAN countries.

The most commonly mentioned program-related contents were personal and cultural exchanges, which coincide with the ASEAN-Korea Centre's vision of playing a role as a channel for strengthening a sustainable and true partnership between ASEAN and Korea. Therefore, if cooperative projects are carried out countinousely with the support form the Korean government, a deeper ASEAN-Korea relations and a rise in the level of awareness of the ASEAN-Korea Centre could be expected.

Conclusion: Significance of the Analysis and Recommendations



3. Conclusion: Significance of the Analysis and Recommendations

To examine Koreans' perception of ASEAN, we conducted a big data analysis by collecting relevant texts from websites and social media.

The big data analysis results revealed that the Korean government and the general Korean public had overall positive perception of ASEAN. In particular, the results confirmed that ASEAN and Korea were in a mutually complementary relationship in terms of economic cooperation. In the area of socio-cultural cooperation, the Korean Wave was seemed to continue serving as a link for sustaining cultural exchanges. As for national security, the results implied that Koreans perceived the ASEAN-Korea cooperation as sustainable in promoting the peace of global community. It is worthy to note that the ASEAN people(Southeast Asians)-related searches revealed that 'discrimination'-related keywords were being replaced by 'difference'-related keywords. This indicates that a coexistence relationship between ASEAN and Korea has started to form based on understanding and cooperation as exchanges between the countries and their people gaining momentum.

However, while the term Southeast Asia is more familiar to Koreans when it comes to exchanges in the tourism industry, ASEAN is not yet much perceived as a travel destination. It seems that efforts should be put to make ASEAN, whose image is limited to a regional or an economic cooperation body, more familiar to the public. It will be possible to raise public awareness of ASEAN if events related to ASEAN tour, ASEAN trip, and entertainments are implemented in cooperation with tourism industry. It would also be possible to enhance the 'ASEAN' brand value and public perception (positioning) by sharing detailed travel information of ASEAN countries in popular social media platforms, such as Instagram and Facebook, and communicating with the public through continuous PR activities targeting specific gender and age groups. To activate ASEAN-related discourses on the web and social spaces, participant-based activities are also to be increased. It also seems necessary to activate programs in various areas of society, culture and tourism, which have ASEAN as their keywords and adequately promote those programs to young people, who are major participants in web spaces. Therefore, to raise Koreans' awareness of ASEAN and further develop the ASEAN-Korea relations, the ASEAN-Korea Centre is expected to play a greater role, e.g. actively pursuing joint projects with external organizations and diversifying relevant programs.

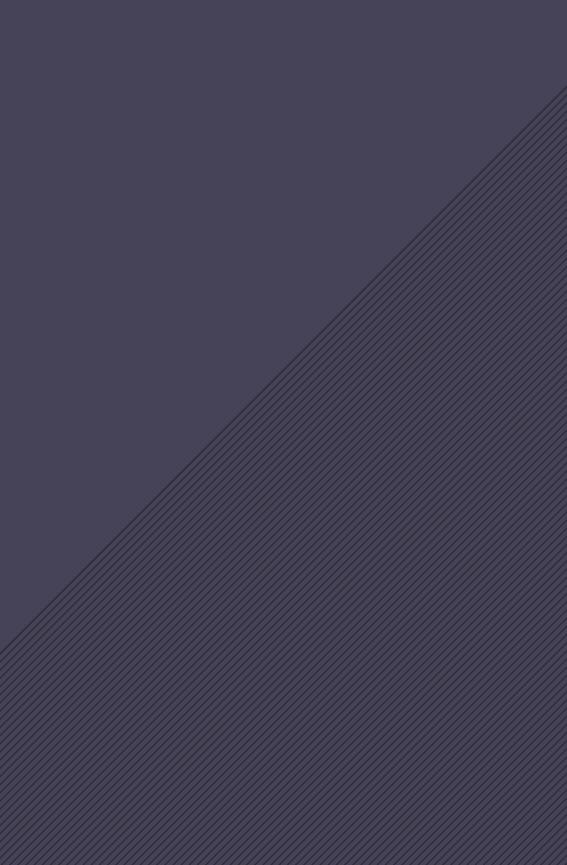
Meanwhile, the limitations of this big data analysis were as follows. Data for the analysis were restricted to Korean texts generated in Korean channels, and the social media was limited to Twitter due to limitations in data collection from Facebook, Instagram, and other social media platforms. A more elaborate analysis on ASEAN-related perception and cross-cultural approach will be possible by expanding target channels of analysis and including texts produced by ASEAN people.

ASEAN and Korea are partners for co-prosperity that seek for multi-dimensional cooperation in economy, society, and culture, and aim for long-term benefits and balance, going beyond the trade-centered exchanges of the past. If Koreans' perception of ASEAN could be examined regularly through big data analyses, it would be possible to understand the level of mutual perception and recognition between ASEAN and Korea, which in turn, will likely contribute to solidifying the long-lasting and genuine relationship between ASEAN and Korea.



Appendix. Results of Social Big Data Analysis on Southeast Asia and ASEAN

Appendix



Appendix. Results of Social Big Data Analysis

1. Keywords Ranking Analysis on Southeast Asia vs. ASEAN

1.1. Political Aspect (Politics-Security)

[Table 15 Keywords Ranking Analysis on Southeast Asia: Politics-Security]

2012,2	2013	201	4	201	5	201	6	201	7
Keyword	Freq.	Keyword	Freq.	Keyword	Freq.	Keyword	Freq.	Keyword	Freq.
Govern- ment	19,830	Govern- ment	10,861	Govern- ment	11,962	Govern- ment	14,161	Govern- ment	13,090
President	9,550	Policy	4,691	War	5,084	President	6,257	President	7,437
Policy	7,084	President	4,242	Policy	4,736	Policy	5,356	Korean Peninsula	5,501
War	6,466	Politics	2,810	President	4,572	War	4,884	Policy	4,572
Politics	4,226	Korean Peninsula	1,989	Politics	3,389	Politics	2,901	War	3,576
Summit	3,451	Adminis- tration	1,617	Korean Peninsula	2,251	Korean Peninsula	2,029	State De- partment	3,234
Korean Peninsula	3,213	Leader	1,549	Leader	1,841	Park Geun-hye	1,891	THAAD	3,164
Park Geun-hye	2,815	Minister	1,429	East Asia	1,754	Leader	1,450	Trump	2,672
Minister	2,553	Political	1,335	Reunifica- tion	1,613	Minister	1,331	Politics	2,314
Adminis- tration	1,946	Reunifica- tion	986맞	Political	1,561	Adminis- tration	1,248	Moon Jae- in	1,798
diplomacy	1,684	Network	808	Adminis- tration	1,370	Political	1,163	Political	1,763
Summit	1,601	Park Geun-hye	806	Minister	1,369	East Asia	1,094	Minister	1,554
Political	1,594	East Asia	663	Tear gas	1,103	Summit	1,066	Missile	1,501
East Asia	1,592	National Assembly	571	For de- struction	1,091	Trump	1,006	Adminis- tration	1,497
Colony	1,559	Election	518	Park Geun-hye	1,084	Reunifica- tion	979	UN	1,428
Reunifica- tion	1,260	Park Geun-hye admin.	435	Colony	1,012	Terror	964	Diplomacy	1,107
Summit meeting	1,154	Parliament	422	Lives	909	Dispute	935	Xi Jinping	1,084
Army	1,091	EU	405	Terror	833	Network	875	Chinese govt.	1,074
Life	991	Democra- cy	401	Military	706	Military	806	Retaliation	1,073
Chinese govt.	272	UN	399	Weapon	700	State De- partment	795	East Asia	1,049

[Table 16 Keywords Ranking Analysis on ASEAN: Politics Security]

2012,2	2013	201	4	201	5	201	6	201	7
Keyword		Keyword	Freq.	Keyword	Freq.	Keyword	Freq.	Keyword	Freq.
Govern- ment	11,607	Commem- orative summit meeting	20,162	Govern- ment	9,468	President	10,796	President	14,665
President	11,096	Govern- ment	8,898	President	7,067	Govern- ment	10,675	Govern- ment	13,186
Korean Peninsula	6,860	President	8,398	Park Geun-hye	4,386	Korean Peninsula	8,044	Korean Peninsula	11,796
Park Geun-hye	5,825	Park Geun- hye	5,632	Summit	4,164	Summit	5,954	Minister	6,825
Summit	5,443	Korean Peninsula	5,182	Policy	4,102	Park Geun- hye	5,308	Moon Jae- in	6,455
Policy	4,946	Summit	4,482	Minister	3,968	Security	4,826	Toward North K.	5,884
Summit meeting	4,538	Summit meeting	3,748	Korean Peninsula	3,804	Policy	4,674	Policy	5,599
EU	4,235	Security	3,570	Security	3,292	THAAD	4,269	Security	5,550
Security	4,130	Leader	3,508	Summit meeting	2,809	Minister	4,004	Missile	5,488
Diploma- cy	3,755	Policy	3,086	APEC	2,070	Summit meeting	3,949	Trump	5,122
Minister	3,698	Minister	2,805	Confer- ence	2,062	Missile	3,709	Diplomacy	4,488
Confer- ence	3,396	EU	2,737	EU	2,049	Conference	3,571	UN	4,136
Politics	2,994	Conference	2,678	Summit	2,032	Diplomacy	3,484	ASEAN Regional Forum	4,051
Leader	2,627	Ministry of Foreign Affairs	2,368	Diplomacy	1,932	THAAD de- ployment	3,271	ARF	3,897
Blue House	2,485	Politics	2,269	Blue House	1,900	Toward North Korea	3,060	Provoca- tion	3,743
East Asia	2,227	Blue House	2,202	Ministry of Foreign Affairs	1,764	North Korean nu- clear issue	3,038	Confer- ence	3,589
EU	2,080	Diplomacy	1,966	Politics	1,654	UN	3,004	Ministry of Foreign Affairs	3,547
APEC	2,028	EU	1,772	National Assembly	1,544	Leader	2,930	THAAD	3,436
ARF	1,818	APEC	1,662	G20	1,537	Blue House	2,753	Kim Jung Un	3,114
Ministry of Foreign Affairs	1,798	Reunifica- tion	1,578	Xi Jinping	1,528	Ministry of Foreign Affairs	2,662	Park Geun- hye	3,089

1.2. Economic Aspect (Economy Trade Investment)

2012,2013		2014		2015		2016		2017	
Keyword	Freq.	Keyword	Freq.	Keyword	Freq.	Keyword	Freq.	Keyword	Freq.
Service	23,020	Sales	11,428	Service	12,568	Service	14,318	Service	15,614
Market entrance	15,957	Service	10,908	Sales	9,259	Brand	12,148	Company	9,253
Company	14,915	Market entrance	8,297	Economy	8,705	Company	10,950	Market entrance	9,012
Economy	14,068	Automo- biles	8,214	Company	8,583	Market entrance	10,524	Brand	8,776
Export	12,885	Economy	7,735	Product	8,159	Product	10,496	Goods	8,420
Sales	12,422	Produc- tion	7,220	Goods	8,094	Sales	10,031	Sales	8,307
Develop- ment	12,336	Company	7,186	Brand	8,090	Export	9,074	Product	8,077
Invest- ment	12,011	Export	7,089	Produc- tion	8,023	Goods	8,842	Export	7,642
Goods	11,838	Goods	7,026	Market entrance	7,903	Invest- ment	8,027	Import	6,909
Produc- tion	11,750	Develop- ment	6,994	Develop- ment	7,675	Economy	7,977	Investment	6,632
Product	11,642	Financials	6,887	Export	7,012	Develop- ment	7,505	Economy	5,960
Automo- biles	11,107	Product	5,731	Invest- ment	6,573	Produc- tion	7,448	Develop- ment	5,932
Financials	8,164	Invest- ment	5,440	Construc- tion	5,387	System	4,845	Production	5,871
Construc- tion	7,221	Popula- tion	4,366	Popula- tion	4,869	Construc- tion	4,476	Demand	3,794
Brand	7,190	Import	4,157	Import	3,905	Revenue	4,375	Export to Southeast Asia	3,793
Population	6,293	Construc- tion	3,857	Industry	3,117	Popula- tion	4,303	Samyang	3,751
Import	5,456	Plant	3,001	Demand	3,088	Import	3,718	Revenue	3,628
Demand	5,242	Brand	2,456	System	2,577	Industry	3,364	Population	3,575
Revenue	5,116	Demand	2,371	Facilities	2,452	Demand	3,242	Construc- tion	3,130
Industry	4,577	Facilities	2,262	Economic	2,343	Facebook	2,911	Naver	3,099

[Table 17 Keywords Ranking Analysis on Southeast Asia: Economy Trade Investment]

2012,2013		2014		2015		2016		2017	
Keyword		Keyword	Freq.	Keyword	Freq.	Keyword	Freq.	Keyword	Freq.
Economy	9,551	Economy	6,448	Economy	6,777	Economy	7,076	Export	6,780
Invest- ment	7,661	Export	5,366	Invest- ment	5,630	Company	6,618	Company	6,461
Export	7,166	Invest- ment	5,151	Company	5,449	Invest- ment	6,084	Economy	6,272
Company	6,298	FTA	5,114	Export	5,428	Export	5,636	Investment	5,412
Service	5,490	Company	5,056	Service	5,044	Service	4,570	Service	5,266
FTA	5,094	Service	4,986	FTA	4,310	Market entrance	4,554	Market entrance	4,533
Develop- ment	5,037	Develop- ment	3,893	Market entrance	4,265	Develop- ment	4,311	Develop- ment	4,341
Market entrance	4,289	Free Trade Agree- ment	3,237	Develop- ment	4,165	Infra	3,636	Goods	3,804
Infra	3,658	Market entrance	3,217	Infra	3,594	Goods	3,334	FTA	3,373
Goods	3,562	Infra	2,992	Goods	3,570	Product	3,130	Product	3,189
Import	3,511	Import	2,918	Construc- tion	3,339	Industry	3,013	Industry	3,046
Free Trade Agree- ment	3,224	Goods	2,538	Industry	2,860	Construc- tion	2,675	Infra	3,036
Industry	3,178	Product	2,436	Free Trade Agree- ment	2,803	Produc- tion	2,568	Population	2,850
Automo- biles	3,097	Industry	2,396	Product	2,726	FTA	2,517	Import	2,849
Construc- tion	3,061	Produc- tion	2,171	Import	2,556	Import	2,279	Production	2,619
Product	2,791	Construc- tion	2,039	Popula- tion	2,480	Sales	2,246	Trade	2,567
Produc- tion	2,773	Automo- biles	1,971	Produc- tion	2,355	Popula- tion	2,022	Sales	2,388
Trade	2,692	Com- merce	1,855	APEC	2,070	Demand	2,003	Demand	2,318
Population	2,361	Popula- tion	1,702	Trade	2,028	Trade	1,801	Brand	2,038
Demand	2,343	APEC	1,662	Automo- biles	1,597	Brand	1,798	Free Trade Agreement	1,991

[Table 18 Keywords Ranking Analysis on ASEAN: Economy Trade Investment]

1.3. Tourist Aspect (Tourism·travel)

2012,2013		2014		201	5	2016		2017	
Keyword		Keyword	Freq.	Keyword	Freq.	Keyword	Freq.	Keyword	Freq.
Travel	22,165	Casino /baccarat	243,275	Travel	17,555	Travel	17,533	Travel	14,998
Hotel	15,193	Travel	18,908	Hotel	8,079	Hotel	6,524	Sightsee- ing	8,284
Automo- biles	11,107	Hotel	13,224	Airport	4,059	Southeast Asia travel	6,175	Prostitu- tion	7,927
Tourist destina- tion	8,673	Air ticket	10,722	Southeast Asia travel	3,923	Airport	3,287	Child pros- titution	7,105
Airline	6,962	Tourist destina- tion	9,078	Sightsee- ing	3,782	Sightsee- ing	3,135	Southeast Asia travel	6,646
Plane	6,105	Automo- biles	8,214	Accom- modation	3,777	Overseas travel	3,010	Tourist	6,273
Airport	5,026	Airline	6,821	Airplane	3,350	Airplane	2,704	Hotel	6,236
Tour	5,004	Plane	5,573	Bus	2,998	Accom- modation	2,499	Adult entertain- ment spot	4,745
Sightsee- ing	4,757	Travel photos	4,911	Overseas travel	2,445	Prostitu- tion	2,270	Overseas travel	2,979
Travel photos	4,677	Airplane	4,292	Tourist destina- tion	2,369	Tourist	2,111	Package	2,790
Free travel	4,635	Air Asia	4,220	Tourist	2,266	Мар	1,913	Airport	2,684
Airplane	4,389	Portrait	4,081	Мар	2,245	Backpack- ing	1,910	Tourist destination	2,540
Korean Air	4,086	Sunglass- es	4,059	Backpack- ing	1,865	Tourist destina- tion	1,897	Airplane	2,399
Portrait	3,993	Sightsee- ing	3,948	Automo- biles	1,860	Air ticket	1,712	Pornogra- phy	2,392
Sunglasses	3,927	Korean Air	3,933	Review	1,716	Review	1,526	Trip to Australia	2,203
Tourist	3,516	Airport	3,819	Tour	1,550	Bus	1,505	Trip to Europe	2,191
Bus	3,383	Special price air ticket	3,629	Shopping	1,495	Automo- biles	1,383	Air ticket	2,176
Accommo- dation	3,147	Accom- modation	3,086	Air ticket	1,492	Shopping	1,226	Shopping	2,057
Asiana	3,087	Asiana	3,081	Vehicle	1,425	Travel agency	1,106	Accommo- dation	2,048
Мар	2,956	Overseas travel	2,758	Memories	1,390	Tour	1,091	Tour	1,988

[Table 19 Keywords Ranking Analysis on Southeast Asia: Tourism·Travel]

2012,2013		2014		2015		2016		2017	
Keyword		Keyword	Freq.	Keyword	Freq.	Keyword	Freq.	Keyword	Freq.
Automo- biles	3,097	Automo- biles	1,971	Automo- biles	1,597	Automo- biles	1,789	Automo- biles	1,793
Official visit	2,065	Commem- oration	1,115	Official visit	1,118	Hotel	1,105	Hotel	1,330
Vessel	829	Hotel	894	Hotel	864	Official visit	1,039	Official visit	1,262
Hotel	816	Official visit	753	Commem- oration	682	Sightsee- ing	778	Sightsee- ing	810
Sightsee- ing	602	Travel	699	Sightsee- ing	591	Airport	653	Tourist	799
Commem- oration	463	Vessel	669	Train	558	Vessel	590	Commem- oration	744
Travel	453	Sightsee- ing	593	Vehicle	461	Travel	482	Vehicle	637
Airport	391	Vehicle	489	Airport	457	Traffic	440	Vessel	545
Train	370	Tourist	434	Tourist	419	Vehicle	439	Airport	479
Tourist	370	Airport	285	Travel	418	Commem- oration	386	Travel	435
Plane	364	Car	279	Flight	388	Airplane	376	Islam	361
Vehicle	319	Train	252	Traffic	383	Tourist	368	Мар	352
Мар	312	Bus	251	Islam	357	Мар	350	Accommo- dation	352
Traffic	183	Traffic	248	Vessel	309	Train	348	Train	335
Aviation	176	Islam	227	Plane	243	Islam	327	Traffic	332
Airplane	166	Korean Air	192	Car	235	Accom- modation	252	Plane	247
Islam	163	Plane	184	Bus	204	Plane	232	Duty free shop	172
Car	143	Мар	174	Aviation	197	Flight	232	Air ticket	154
Flight	143	Aviation	143	Express train	176	Vacation spot	221	Flight	152
Accommo- dation	119	Visa	143	Subway	159	Bus	201	Aviation	150

[Table 20 Keywords Ranking Analysis on ASEAN: Tourism·Travel]

[Table 21 Keywords Ranking Analysis on Southeast Asia: Society-Culture-Education-People-to-people
Exchanges]

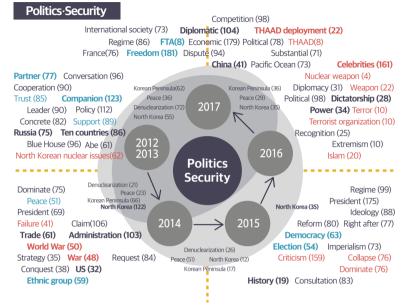
2012,2013		2014		2015		2016		2017	
Keyword	Freq.	Keyword	Freq.	Keyword	Freq.	Keyword	Freq.	Keyword	Freq.
Culture	12,340	Food	8,753	History	9,382	Culture	7,726	Culture	6,029
History	11,321	History	8,097	Food	8,706	Food	6,918	English	6,011
Food	10,274	Culture	7,993	Culture	8,123	History	6,805	Food	5,974
Event	8,429	Society	5,314	Society	4,809	Education	4,660	History	5,252
Society	7,632	English	4,139	Event	4,477	Society	4,634	Event	4,983
English	6,057	Event	4,132	English	4,331	Event	4,181	Education	4,202
Education	5,950	Cooking	3,998	Education	3,848	English	3,713	Society	3,825
Movie	5,390	Fruits	3,427	Cooking	3,550	Movie	2,366	Curry	3,759
Tradition	4,989	Education	3,229	Tradition	2,848	Multi- culture	2,303	Hot taste	3,755
Cooking	4,572	Tradition	3,143	Meat	2,797	Tradition	2,156	Indian curry	3,739
Festival	3,964	Movie	3,123	Meal	2,782	Study	2,039	Hot and spicy chicken	3,739
Meal	3,765	Meat	2,742	Picture	2,767	Picture	1,859	Burning	3,736
Study	3,567	Study	2,720	Movie	2,713	Meal	1,834	Hot and spicy chicken sauce	3,735
Picture	3,325	Meal	2,698	Fruit	2,652	Korean Wave	1,830	Hot and spicy curry chicken fried noodle	3,735
Fruit	3,157	Coffee	2,458	Coffee	2,229	Cooking	1,789	Curry flavor	3,735
Coffee	3,074	Picture	2,120	Religion	2,109	Totally oppose multi- culture	1,677	Spicy	3,735
Meat	3,013	Totally oppose multi- culture	2,102	Study	2,071	Religion	1,673	Tropical fruit	2,742
Berry	2,596	Ceremony	1,795	Beer	1,834	Fruit	1,554	Movie	2,725
Song	2,433	Berry	1,616	Buddhism	1,794	Game	1,438	Olympic Games	2,023
Groceries	2,397	Restau- rants	1,604	Language	1,716	Orange	1,380	Translation	2,010

[Table 22 Keywords Ranking Analysis on ASEAN: Society·Culture·Education·People-to-people Exchanges]

2012,2013		2014		2015		2016		2017	
Keyword		Keyword	Freq.	Keyword	Freq.	Keyword	Freq.	Keyword	Freq.
Event	3,140	Event	10,113	Event	3,734	Event	3,422	Event	3,529
Culture	2,851	Ceremony	3,813	Culture	2,371	Culture	2,622	Culture	2,465
Society	2,260	Culture	2,817	Education	1,683	Exchange	1,778	History	1,838
History	1,905	ASEAN Movie Festival	2,687	History	1,640	Education	1,778	Exchange	1,744
Exchange	1,660	Society	1,772	Fermenta- tion	1,628	History	1,653	Society	1,628
Education	1,463	Education	1,625	Exchange	1,627	Society	1,648	Education	1,543
Fermenta- tion	1,104	History	1,585	Society	1,364	Fermen- tation	1,217	Fermenta- tion	1,417
Forum	827	Exchange	1,536	Forum	992	Event site	782	Food festival	1,074
Korean Wave	589	Fermenta- tion	1,407	Korean Wave	732	Forum	779	Korean Wave	853
Talkfest	578	Movie	891	Seminar	599	Korean Wave	771	Food	732
Tradition	507	Korean Wave	666	Tradition	428	Game	562	Movie	643
Groceries	479	Tradition	616	English	417	Exhibition	485	Tradition	564
Perfor- mance	426	Exhibition	606	Consulta- tion	362	Tradition	469	Talkfest	558
Movie	375	Perfor- mance	532	Islam	357	Movie	465	Groceries	545
Historic	370	Food	510	SJ school	331	Groceries	461	Inter- national Travel Fair	519
English	365	Forum	503	Movie	329	Perfor- mance	454	Free ad- mission	511
Seminar	346	Game	428	Historic	327	Consulta- tion	425	Expected to partici- pate	511
Festival	297	Festival	397	Talkfest	323	Seminar	414	Prior reg- istration	511
Language	287	English	389	Food	303	Talkfest	373	Forum	488
Food	245	Seminar	378	Groceries	297	Food	350	Perfor- mance	466

2. Keyword Network Analysis on Southeast Asia vs. ASEAN

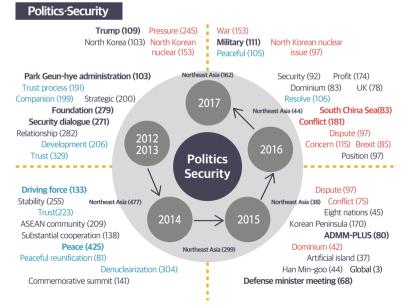
2.1. Political Aspect (Politics-Security)



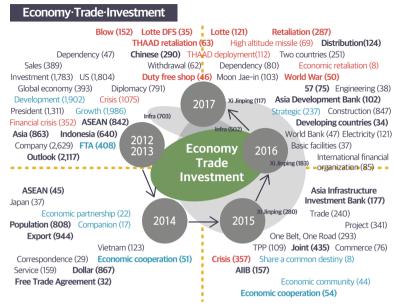
[Diagram 10 Keyword Network Analysis on Southeast Asia: Politics Security]

* Keyword network=rising issue keywords generated after removing overlapping words from the list of top 200 keywords mentioned together with keywords of each attribute

[Diagram 11 Keyword Network Analysis on ASEAN: Politics Security]



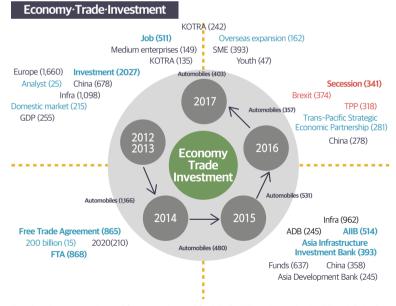
2.2. Economic Aspect (Economy-Trade-Investment)



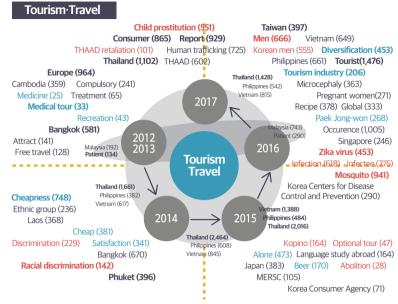
[Diagram 12 Keyword Network Analysis on Southeast Asia: Economy Trade Investment]

* Keyword network=rising issue keywords generated after removing overlapping words from the list of top 200 keywords mentioned together with keywords of each attribute

[Diagram 13 Keyword Network Analysis on ASEAN: Economy Trade Investment]



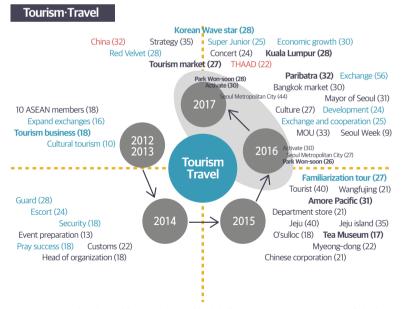
2.3. Tourist Aspect (Tourism·travel)



[Diagram 14 Keyword Network Analysis on Southeast Asia: Tourism·travel]

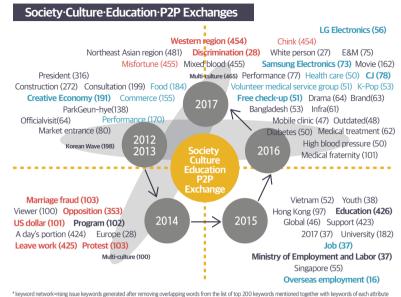
* Keyword network=rising issue keywords generated after removing overlapping words from the list of top 200 keywords mentioned together with keywords of each attribute

[Diagram 15 Keyword Network Analysis on ASEAN: Tourism·Travel]



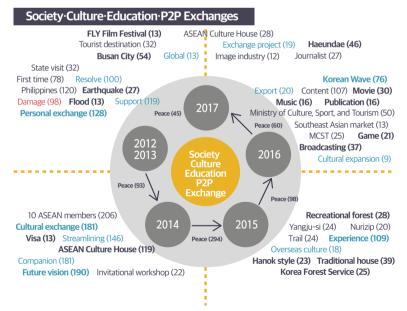
2.4. Social Aspect (Society-Culture-Education-People-to-peope Exchanges)

[Diagram 16 Keyword Network Analysis on Southeast Asia: Society-Culture-Education-Peopleto-peope Exchanges]



keyword network-rising issue keywords generated alter removing overlapping words not in the list of top 200 keywords mentioned together with keywords of each attribute

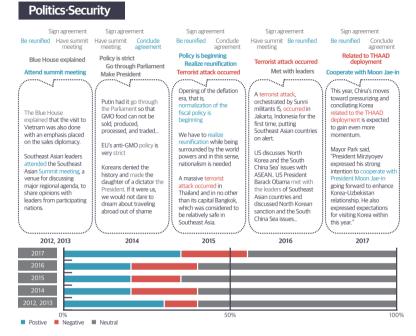
[Diagram 17 Keyword Network Analysis on ASEAN: Society-Culture-Education-People-to-peope Exchanges]



3. Sentiment Analysis on Southeast Asia vs. ASEAN

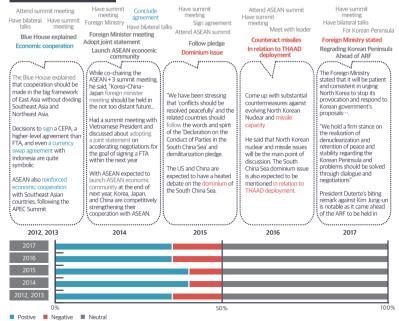
3.1. Political Aspect (Politics-Security)

[Diagram 18 Sentiment Analysis on Southeast Asia: Politics Security]

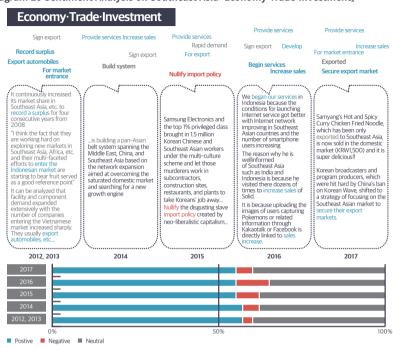


[Diagram 19 Sentiment Analysis on ASEAN: Politics Security]

Politics Security

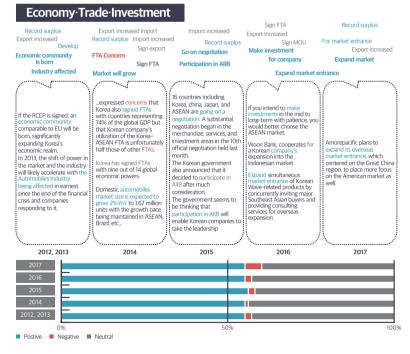


3.2. Economic Aspect (Economy-Trade-Investment)



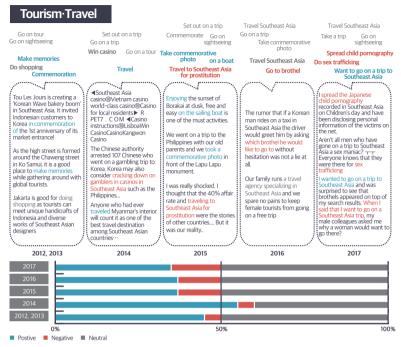
[Diagram 20 Sentiment Analysis on Southeast Asia: Economy Trade Investment]

[Diagram 21 Sentiment Analysis on ASEAN: Economy·Trade·Investment]



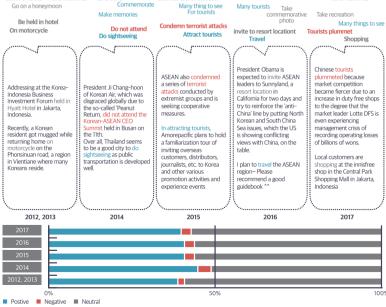
3.3. Tourist Aspect (Tourism·Travel)

[Diagram 22 Sentiment Analysis on Southeast Asia: Tourism·Travel]



[Diagram 23 Sentiment Analysis on ASEAN: Tourism·Travel]

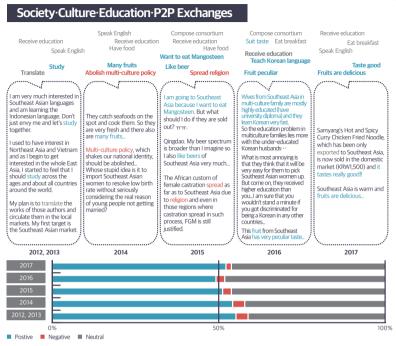
Tourism·Travel Commemorate Make memories Like travel Go on a honeymoon Commemorate



Count as tourist attraction

Make memories

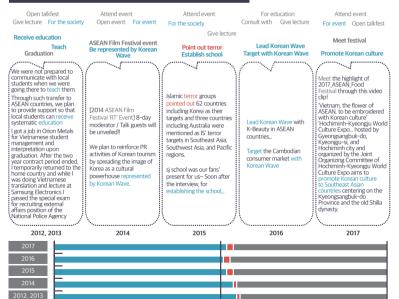




[Diagram 25 Sentiment Analysis on ASEAN: Society Culture Education People-to-people Exchanges]

Society Culture Education P2P Exchanges

Postive Negative Neutral



50%



10.0%



The ASEAN-Korea Centre was established as an intergovernmental organization with the aim to promote exchanges among Korea and the 10 ASEAN Member States. It was officially inaugurated in 13 March 2009, the year which marked the 20th anniversary of the Dialogue Partnership between ASEAN and Korea in accordance with the Memorandum of Understanding (MOU) signed at the 11th ASEAN-Republic of Korea (ROK) Summit in November 2007 and entered into force in December 2008.

VISION

To be a key player in building a lasting and genuine partnership between ASEAN and Korea

GOALS

- Enhance ASEAN-Korea partnership
- Promote mutual understanding through cultural exchange and people-to-people contact
- Support ASEAN integration efforts

MANDATES

- Increase trade volume
- Accelerate investment flow
- Invigorate tourism
- Enrich cultural and people-to-people exchange

ACTIVITIES

The ASEAN-Korea Centre implements diverse work programs and activities to strengthen mutual cooperation and deepen friendship among the ASEAN Member States and Korea through increasing trade volume, accelerating investment flow, invigorating tourism, and enriching cultural and people-to-people exchange.







