

# HRI Quarterly Economic Review

I. Economic Issues Facing Korea  
II. North Korean Issues  
[Annex] Domestic and Global  
Economic indices

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Devoting to economic research  
and human resource development  
with intellectual conscience and sincerity,  
the Hyundai Research Institute leads  
the advancement of Korean Economy  
in the 21st century by proposing  
creative policy alternatives.

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< Executive Summary >

**I . Economic Issues Facing Korea**

『Trend and Forecast of Korea’s Potential Economic Growth Rate』

The continued low growth rate of 2% plus is due to the falling potential growth rate. ‘The potential growth rate’ refers to an estimate of the economic growth rate a country can sustain by utilizing the nation’s agents of production including labor and capital without causing inflation, which generally reflects a stable medium and long term growth trend of a nation’s economy. Considering the recent trend, the potential growth rate of Korea is estimated to drop to 2% plus sooner or later. This report forecasts the potential growth rate of Korea up to 2030 based on the population projection of the National Statistical Office using quantitative techniques, and is modeled on the experiences of advanced countries with 3 different scenarios: realistic, optimistic, and worst-case.

『Analysis on Export Similarity and Market Share between Korea and Major Competing Nations in the Major Markets』

With the growth rate of the global export market declining, the competition between exporting nations is expected to be more intensified. We examined the export similarity and market shares of major competing nations of 2015 to seek countermeasures to overcome the current depression facing Korean export industries. China, Japan, the US, and Germany were selected as Korea’s major competing nations, and export markets to be analyzed are China, Japan, and the US. Export similarity refers to an index showing the similarity of export item structure with a value of 0 to 100p, and the nearer 100p, the more intensified the export competition.

『Industrial Strategy in the Age of Hyper-Connected Society』

A hyper-connected society where everyone and everything is connected to a network as a result of expanding IT technology and digital basis. Recently, industries are accelerating moves to innovate and create new values utilizing networked machines and information, and it is expected that not only manufacturing industries, but service industries will also seek to be “smartized”. We are therefore examining the case of Germany taking more effort than any other country for smart industrialization under the banner of the Fourth Industrial Revolution.

**II . The North Korean Issues**

『Korean Peninsula Peace Index, Result and Implications of Survey Conducted in the 4th Quarter 2015』

Both the Q4 2015 peace index and Q1 2016 expectation index plummeted. The Q4 index recorded 36.0, a quarter-on-quarter drop of 11.0p in the aftermath of North Korea’s 4th nuclear test, and the inter-Korean relationship reverted to a ‘high tension state’ from ‘co-existence of cooperation and confrontation state’, the same level as when the August 25, 2015 Agreement was reached. The Q1 2016 expectation index was 23.8, a quarter-on-quarter decrease of as much as 29.3p, lower than that of Q2 2012(24.1) when Kim Jong-Il died and the lowest ever since recording began.

## **I . Economic Issues Facing Korea**

### **1. Trend and Forecast of Korea's Potential Economic Growth Rate**

#### ***Summary***

The growth engine of Korean economy is rapidly cooling down. According to the Bank of Korea, Korean economic growth rate of 2015 was 2.6%. The low economic growth of 2% plus is not confined to 2015 alone. Except for the 3.3% growth rate in 2014, the economic growth rate of Korea has been under 3% since 2012. The continued low growth rate of 2% plus is due to the falling potential growth rate. 'The potential growth rate' refers to an estimate of the economic growth rate a country can sustain by utilizing the nation's agents of production including labor and capital without causing inflation, which generally reflects a stable medium and long term growth trend of a nation's economy. Considering the recent trend, the potential growth rate of Korea is estimated to drop to 2% plus sooner or later. This report forecasts the potential growth rate of Korea up to 2030 based on the population projection of the National Statistical Office using quantitative techniques, and is modeled on the experiences of advanced countries with 3 different scenarios: realistic, optimistic, and worst-case.

#### ***Trend and Forecast of Potential Growth Rate***

**(Trend of Potential Growth Rate)** The potential growth rate was calculated using the production function method, dividing the gross domestic production by the contributory portion of production factors such as labor, capital, and the total factor

productivity. Our analysis shows the potential growth rate of Korea for the period 2011 to 2015 was 3.2%. Examining the potential growth rate by period, the early 1990s was 7.3%, which dropped to 5.6% for 1996 to 2000 due to the then financial crisis. The recent global financial crisis further decreased it to 3.9% for 2006 to 2010.

**(Assumptions for the Forecast of Growth Rate)** The forecast of the potential growth rate up to 2030 is projected in 3 different scenarios: realistic, optimistic, and worst-case. The assumption for the realistic forecast is shown in the table below. The optimistic scenario was prepared on the assumption that the economic activity rate of Korea is approaching the average rate of advanced OECD nations (70%). The growth of total fixed capital formation is assumed to be higher than that of the realistic scenario by 0.3%p, and the total factor productivity is also higher than the OECD average. The worst-case scenario assumes that the economic activity rate remains unchanged from the present, that the growth of total factor productivity is assumed lower than that of the realistic scenario, and that the total factor productivity is also lower than the levels of advanced OECD nations.

< Assumptions for the Realistic Scenario Forecast >

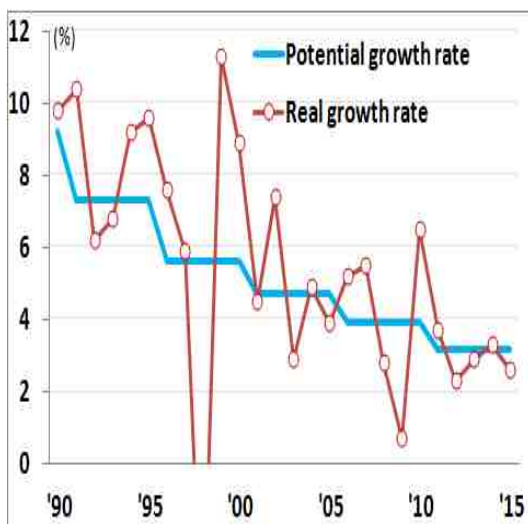
	전망 가정
Labor Input	<ul style="list-style-type: none"> <li>- Forecast of labor population is based on the future population projection prepared by the National Statistical Office.</li> <li>- Economic activity rate and the annual working hours of working people are based on the estimates prepared in the past</li> <li>- Natural unemployment rate is estimated assuming the average natural unemployment rate for the past 10 years is sustained.</li> </ul>
Capital Input	<ul style="list-style-type: none"> <li>- Depreciation rate is estimated assuming the current rate continues</li> <li>- Total fixed capital formation is forecast based on the estimates in the past.</li> </ul>
Total Factor Productivity	<ul style="list-style-type: none"> <li>- Estimated assuming Korea is approaching the average rate of the OECD member nations (1.3%p)</li> </ul>

**(Forecast of the Potential Growth Rate)** The realistic scenario predicts the rate will fall to around 2.7% for the period 2016-2020, around 2.3% for 2021-2025, and 2.0% for 2026-2030. If the current economic situation persists, the rate can drop to 2% plus level in the near future, and it cannot be entirely ruled out that the rate could even dwindle to 1% plus from the mid-2020s.

The optimistic scenario estimates the potential growth rate of Korea to be 3.2% for 2016-2020, 2.9% for 2021-2025, and 2.7% for 2026-2030. The rate is forecast to be down to the 2% plus level by the mid-2020s if the total factor productivity is maximized and labor and capital input increased.

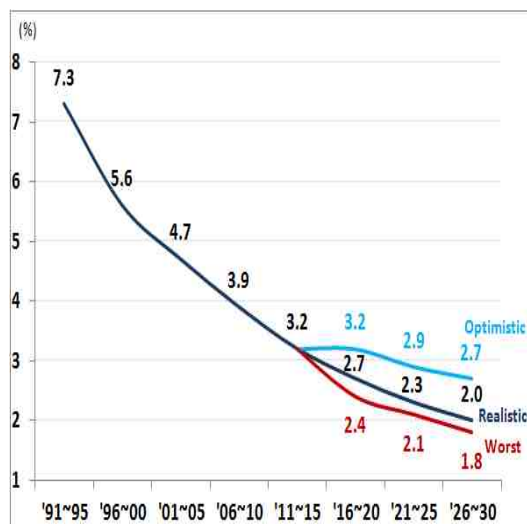
The worst-case scenario forecasts the rate to be around 2.4% for 2016-2020, 2.1% for 2021-2025, and 1.8% for 2026-2030. The rate is estimated to fall to 1.5% plus by the late 2020s in the case that the total factor productivity stays low compared to advanced nations combined with sluggish labor supply and depressed corporate investment.

< Trend of Real Grow Rate & Potential Growth Rate >



Source : Estimated by HRI.

< Potential Growth Rate By Scenario >



Source : Estimated by HRI.

### ***Policy Suggestions***

It is imperative to enhance the potential growth rate by increasing economic activity and capital input, and innovating productivity. To prevent declining potential growth rate, the following policies should be introduced:

First, to address the shortage of labor force, positive and sustained policy to raise birth rate along with measures to increase economic activity rate of women, extend the retirement age, and to implement a positive drive for immigrant labor force. Second, it is imperative to improve investment environment to attract both domestic and direct foreign investment to sustain an optimum level of investment. Third, efforts should be made for the expansion of human capital investment and for the promotion of national health. Fourth, it is required to enhance the efficiency of R&D investment for the economic system-oriented intensive growth.

## **2. Analysis on Export Similarity and Market Share between Korea and Major Competing Nations in the Major Markets**

**- Korea doing well, but export war is intensifying.**

### ***Summary***

With the growth rate of the global export market declining, the competition between exporting nations is expected to be more intensified. Not only Korea, but also China, the US, Japan, and Germany suffered dwindling exports leading to a negative growth of the global export market in 2015, and it is unlikely to improve in 2016 with the overseas market situation remaining in



depression. We examined the export similarity and market shares of major competing nations of 2015 to seek countermeasures to overcome the current depression facing Korean export industries. China, Japan, the US, and Germany were selected as Korea's major competing nations, and export markets to be analyzed are China, Japan, and the US. Export similarity refers to an index showing the similarity of export item structure with a value of 0 to 100p, and the nearer 100p, the more intensified the export competition.

***Analysis on Export Similarity and Market Shares between Korea and Major Competing Nations in the Major Markets***

First. With the growth of the global export market declining, competition between exporting nations has intensified. The global export market recorded a negative growth in terms of value and the growth rate also slowed down in terms of volume. In 2015, Korea had to face the challenge of greater export competition with major countries such as China, Japan, the US, and Germany than in the previous year. The result of analysis on export similarity between Korea and the four nations mentioned above indicates that Korea's index stayed at 58.8p, a year-on-year rise of 1.2p, the highest since the recent global financial crisis.

Second. It is Japan that competed with Korea most fiercely in the global market in 2015, and the intensity of competition between Korea and China is growing. Korea has the highest export similarity of 58.8p to Japan, the US to Germany, Japan to Germany, and Germany to Japan. China showed export similarity of 44.8p to Korea, the highest of all four nations. Among the four nations, it is China whose export similarity to Korea is increasing the fastest.

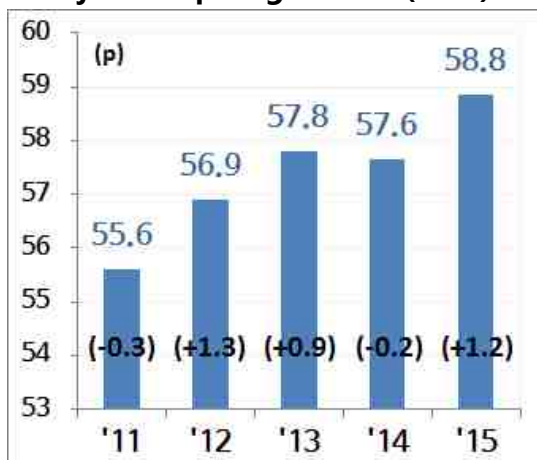
Third. It is the economically-recovering US market where Korea competed most fiercely with major exporting nations in 2015. Although the global economic growth rate of 2015 recorded 3.1% and a year-on-year drop of 0.3%p, the US showed an economic growth of 2.5%, a year-on-year rise of 0.1%p. It is also the US market where the average export similarity between Korea and other four nations marked 57.8p, the highest of all.

Fourth. Korea is competing with Japan most fiercely in the US market and increasing its share. Korea's export similarity to Japan in the US market, the number 1 in the world, was 61.2p, a year-on-year increase of 3.9p, a remarkably high level compared to other nations. Despite intensifying competition, Korea's share in the US market showed a year-on-year increase of 0.3%p. However, China's share in the US market recorded 21.5%, a year-on-year rise of 1.6%p, maintaining the number one position. China is believed to be increasing its share in the US market focusing on the exports of low technology products while Korea, Japan, and Germany are competing mainly for the high technology items.

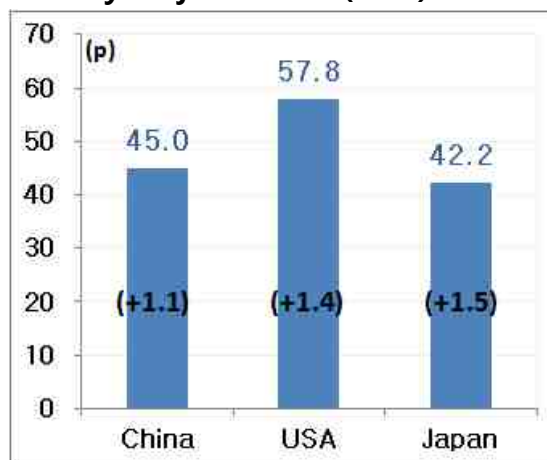
Fifth. Although Korea is increasing its market share in China versus its arch rival Japan, the US is expanding its exports of high-tech products, threatening Korea's number one place in the Chinese market. Korea's export similarity in the Chinese market in 2015 was 57.5p against Japan and 32.7p against the US. However, the US with its relatively low export similarity to Korea is threatening Korea's number one place as it recorded a year-on-year market share increase of 1.1%p in the Chinese market. The US is believed to have been able to increase its market share in China, focusing on the exports of high value-added items including electronic goods and aircraft.

Sixth. Korea is competing mainly with China in the Japanese market, struggling in the competition with China to sustain its current place. In 2015, Korea's export similarity to China was 43.0p, and 32.3p and 31.3p against the US and Germany, which indicates that Korea is competing in the Japanese market primarily with China for the exports of low-mid technology products. However, China recorded the largest market share of 24.7%, a year-on-year increase of 2.4%p in 2015 while Korea remained at 4.1%, same as in the previous year, which shows that Korea is losing its battle against China in the area of low-mid technology products.

< Average Export Similarity in the Global Market between Korea and Major Competing Nations(2015) >



< Average Export Similarity between Korea and Major Competing Nations by Major Market (2015) >



Source : Prepared by HRI based on the data of Korea Trade Association.

Note 1) Figures in the brackets show year-on-year increases/decreases(p).

2) Based on statistics of 2015 for Korea, January-November 2015 for China, Japan, & the US, and January-September for Germany.

### ***Policy Suggestions***

For Korean export products currently facing the double challenges of a slowing growth rate and intensifying competition, the following measures should be taken to survive and secure a sufficient competitive edge in the global market:

First, a new export paradigm should be introduced for the enhancement of export potentials by creating more added values, improving productivity, and promoting new growth industries rather than seeking quantitative growth. Second, Korea should target the US market, a stand-alone healthy economy to increase exports to the US, and take it as a new export-recovering engine. Third, in the Chinese market, the competitive edge of intermediate goods should be maintained through a higher value-added policy for materials and parts while setting up tailor-made strategies to meet the demand of expanding consumer goods market at the same time. Fourth, the existing FTA Agreements should be positively utilized to enhance the competitive edge of prices for Korean export products. Fifth, in the long term, non-price competitiveness should improve through R&D investments in product quality, design, and business brand.

### **3. Industrial Strategy in the Age of Hyper-Connected Society**

#### **- Contents & Implications of Germany's Smart Industrialization**

##### ***Advent of the Age of Smart Industrialization***

A hyper-connected society where everyone and everything is connected to a network as a result of expanding IT technology and digital basis. The number of worldwide Internet of Things (IoT) is expected to increase from 4.9 billion in 2015 to 20.8 billion by 2020, which accounts for 2.7 IoTs per person worldwide and is 3 times the size of the world population.

Recently, industries are accelerating moves to innovate and create new values utilizing networked machines and information, and it is expected that not only manufacturing industries, but service industries will also seek to be “smartized”. We are therefore examining the case of Germany taking more effort than any other country for smart industrialization under the banner of the Fourth Industrial Revolution.

### ***Key Contents of Germany’s Smart Industrialization***

#### **1) Germany’s Industrial Strategy Changes**

Up until the mid-2000s, Germany’s industrial strategy was to sustain the position of world leader in the area of ICT convergence and embedded system before it set up High Technology Strategy (2010) and Action Plan (2012) with a focus on the promotion of high technology and smart manufacturing process. Recently, Germany announced ‘Smart Service World 2025’ in March 2015 and is pushing forward all industries’ smartization along with Industry 4.0, an existing smartization strategy for the manufacturing industry. Smart Service Strategy is a follow-up project of Industry 4.0 which is essential to implement Smart Factory properly. Having invested 200 million euro in Industry 4.0(2012-2015) and 50 million euro in Smart Service World 2025(2014-2019), the German government is expanding investment in the development of technology and infrastructure-related R&D for the construction of smart manufacturing and service platforms.

#### **2) Key Contents of Germany’s Smart Service**

Germany is focusing on Smart Service utilizing ICT technology and data for the implementation of smart industrialization, and

the details are as follows:

**Concept** : A Smart Service refers to a service providing customized service to the needs of consumers with each value chain based on Smart Data which is a refined version of big data. In other words, it is a web-based tailor-made service combined with physical and digital service provided for maximum utility for both producers and consumers by using smart data. The size of the big data market is forecast to increase from US\$3 billion in 2015 to US\$8.9 billion in 2020, an average annual increase of 26% with relevant service and software as focal points.

**Characteristics** : Smart service has 4 characteristics: intelligent, customized, converged, and swift. Unlike existing services, an intelligent service analyzes and utilizes accumulated data through real time communication with products and consumers. While an existing service is provided from the suppliers' viewpoint, a smart service is providing a customized products and services from the consumers' viewpoint. Furthermore, smart service exhibits convergence, providing pan-industrial level service as well as shortening the service launch cycle to meet the consumers' demand swiftly.

**Creation Structure** : Construction of a platform capable of utilizing and combining data analysis and smart data in various ways is essential for the creation of a smart service.

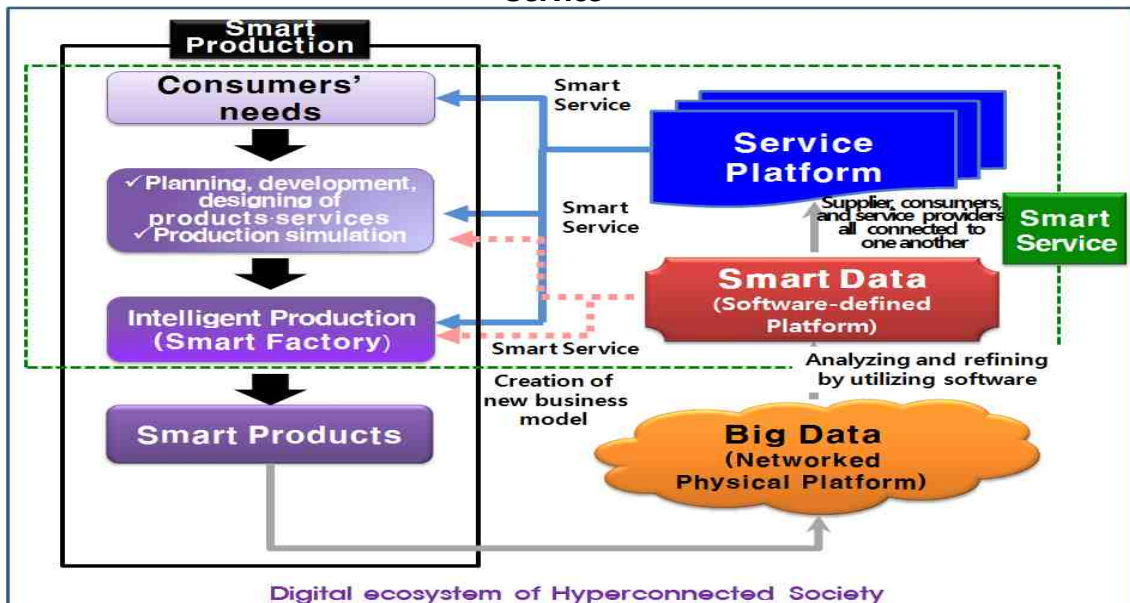
The smart service platform works in three stages:

First, a networked physical platform generating big data through networked smart products. Second, a software-defined platform that can convert the generated data to smart data capable of customized real-time analysis service. Third, a service platform generating various business models with products, suppliers, service providers, and customers connected to

each other.

Capability of data analysis and securing smart workers are important to create and utilize smart service. When the smart service is expanded in earnest, it will bring about many changes in many areas redefining such as relationships between consumer and service provider, business environment, and technology infrastructure.

< Structure of Germany's Smart Industrialization – Smart Production & Smart Service >



Source : HRI.

**Areas Expected to be Developed** : Smart service is forecast to expand rapidly to industries such as manufacturing, logistics, energy, medical service and agricultural areas where currently the level of digital business is relatively low. The manufacturing industry will have a new business model such as an information market place which identifies customers' needs precisely and informs the manufacturer, pushing forward smart service throughout the industry. The logistics industry will also make progress with the smart service which optimizes the transportation of goods including heavy items with real time analysis of digital

data. The energy, medical service, and agricultural industries will also benefit from customer-centered smart business models through data analyses. The importance of smart business is expected to grow day by day with the number of Fortune magazine's top 1000 businesses increasingly recognizing service as 'the most important factor'.

**Expected Effect** : Expansion of smart service can lead to new business, job creation, productivity enhancement of service industry and export growth. Boston Consulting estimated that despite an expected loss of 610,000 jobs as a result of Germany's introduction of Industry 4.0, 960,000 new jobs will be created mainly in the area of high value-added services such as data analyses and R&D, increasing the number of jobs by 350,000 overall. The real value-added growth rate of Germany's service industry was -0.16% for 2007-2013, lower than 0.45% of manufacturing industry. However, it is forecast that the productivity of service industry will improve and exports of service will also increase when manufacturing is combined with smart service. Recent trend shows the growth rate of global service export is higher than that of product export, and with the acceleration of smart service, the export of services export is expected to grow.

**Conditions for Implementation** : Introduction of regulations and standards that can encourage participation of a variety of sectors, security enhancement and , securing smart workers are prerequisites for the expansion of smart service. In particular, securing smart workers who can create new service by properly utilizing smart data and combining a variety of services is more important than anything else.

### ***Policy Tasks***



Provisions for the impending age of smart service is urgently required to prepare for the hyper-connected society and to enhance Korean industries' competitive edge:

First, a digital ecosystem should be built and strengthened by pushing forward smart service throughout industries. A comprehensive policy for the smart industrialization of the overall value chain should be created to innovate the Korean manufacturing industry along with the expansion of smartization of small and medium factories. Second, policy alternatives should be in place to strengthen connectivity between manufacturing and service sectors. Departing from the existing dichotomous way of thinking dividing into sales of products and after-sales service, the government should introduce a policy enhancing manufacturing and service connectivity such as promotion of 'convergence of industries'. Third, specialized assistance to business starters is needed to create new values with IT infrastructure connected to a variety of sectors. A business start-up environment should be created whereby a variety of business models can be developed with collaborations not only between industry-university-research institute, but also through a pan-industrial collaboration system. Fourth, businesses capable of data analysis with global competitive edge and smart workers should be secured. For this purpose, a strategy to secure businesses capable of refining big data to smart data useful to manufacturing and service and a strategy to educate talented workers for the operation of smart data are required. Fifth, considering the basis of smart industrialization is an open-type platform, the issue of standardization and security enhancement should be widely discussed involving people from all walks of life. A social consensus should be found on the issues of security and privacy, and for the introduction of standardized operating systems.

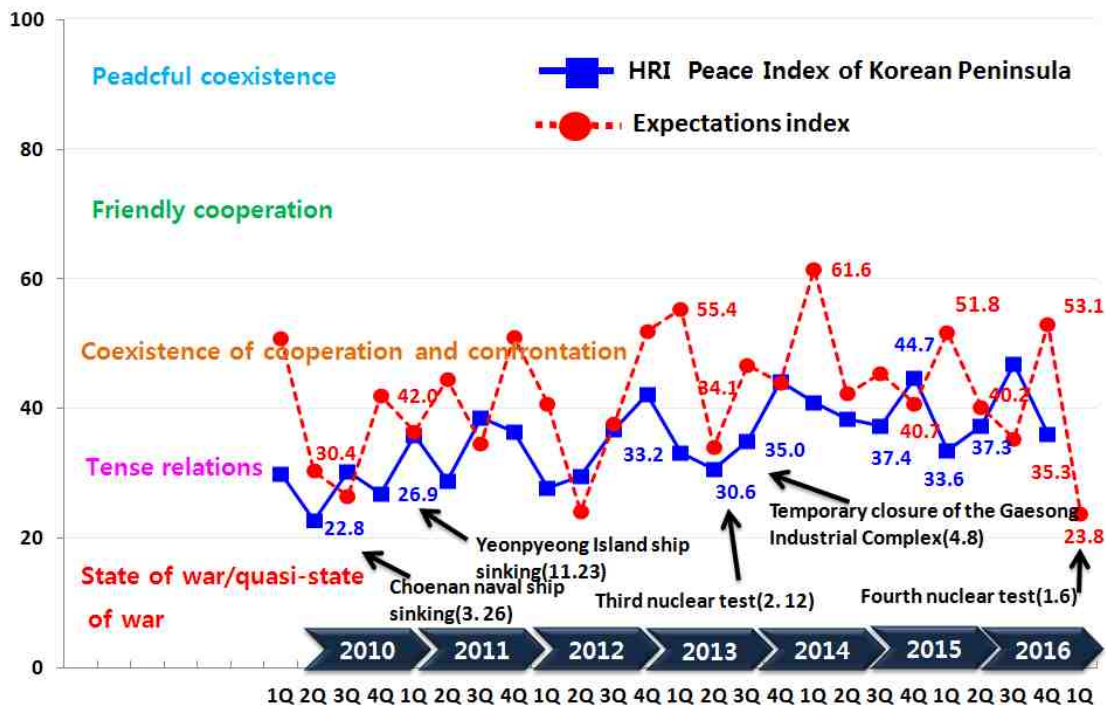
## II. North Korean Issues

### 1. Korean Peninsula Peace Index, Result and Implications of Survey Conducted in the 4<sup>th</sup> Quarter 2015.

#### *Comprehensive Assessment*

Both the Q4 2015 peace index and Q1 2016 expectation index plummeted. The Q4 index recorded 36.0, a quarter-on-quarter drop of 11.0p in the aftermath of North Korea’s 4<sup>th</sup> nuclear test, and the inter-Korean relationship reverted to a ‘high tension state’ from ‘co-existence of cooperation and confrontation state’, the same level as when the August 25, 2015 Agreement was reached. The Q1 2016 expectation index was 23.8, a quarter-on-quarter decrease of as much as 29.3p, lower than that of Q2 2012(24.1) when Kim Jong-Il died and the lowest ever since recording began.

< Trend for HRI Korean Peninsula Peace Index for 2010-2015 >



### ***Key Characteristics***

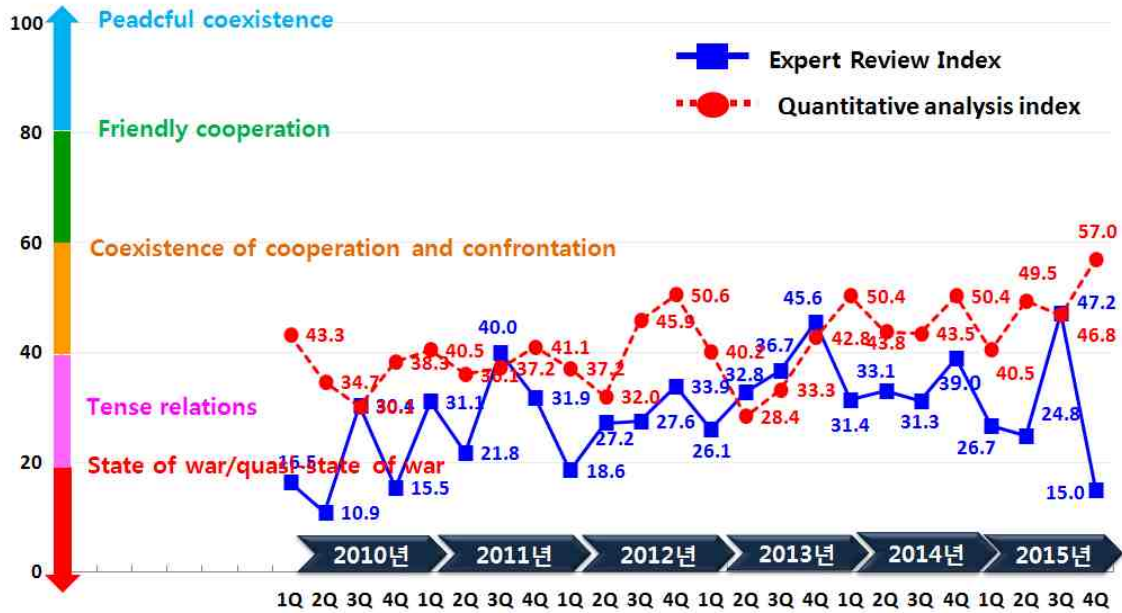
The Q4 2015 peace index and the Q1 2016 expectation index feature the following:

First, the Peace index is comprised of an experts' evaluation index, a subjective indicator, and a quantitative analysis, an objective one. The experts' evaluation index of Q4 2015 sharply fell while the quantitative analysis index showed quite the opposite move. The experts' evaluation index showed a quarter-on-quarter drop of 32.2p, the largest fall since the survey started, as a result of collapsed talks between the two Korea's authorities, and the launch of submarine-launched ballistic missile (SLBM), a similar level to when the Chunamham naval vessel was sunk in the Q2 2014 (10.9) and when Yeonpyungdo island was bombed in Q4 2010 (15.5). On the contrary, the quantitative analysis index recorded 57.0, a quarter-on-quarter rise of 10.2p owing to the sustained Kaesong Industrial Complex and increased non-governmental exchange.

Second, the Q1 2016 expectation index was 23.8, a quarter-on-quarter fall of 29.3p, reflecting a sense of insecurity on the inter-Korean relationship. In other words, the 4th nuclear test and notice of additional missile launch, sanctions against N. Korea by Korea, the US, and Japan in anticipation of N. Korea's counterblast, key political and military events of both Korea scheduled for the 1st half of 2016, and the appointment of Kim Young-chul as director of the United Front Department, known to be a hardliner, make it all the more difficult to maintain momentum for the improvement of the two Korea's relationship.

Third, the experts' evaluation on the inter-Korean relationship swiftly reversed regardless of their political orientation. This sudden change of evaluation appears driven by disappointment over the strained North-South relations created by the lack of progress in the talks between the two authorities held for the first time in 100 days since the August 25 Agreement was reached and N. Korea's launch of SLBM.

< Trends for the Expert Assessment Index & Quantitative Analysis Index for 2010-2015 >



< Experts' Assessment Index by Political Disposition >

Section	Conservatives		Moderate		Liberal		Expert review index	HRI Peace Index	Expectation Index
	Now	Expected	Now	Expected	Now	Expected			
Q4 2015	18.8 (▽33.3)	25.7 (▽29.8)	16.3 (▽32.1)	23.8 (▽30.8)	15.2 (▽30.9)	21.4 (▽27.3)	15.0 (▽27.3)	36.0 (▽11.0)	23.8 (▽29.3)
Q3 2015	52.1 (▲24.8)	55.5 (▲16.1)	48.4 (▲22.8)	54.6 (▲18.4)	46.1 (▲21.1)	48.7 (▲18.5)	47.2 (▲22.4)	47.0 (▲9.7)	53.1 (▲17.8)
Q2 2015	27.3 (▽4.5)	39.4 (▽5.6)	25.6 (▽1.7)	36.2 (▽8.9)	25.0 (▲0.4)	30.2 (▽3.1)	24.8 (▽1.9)	37.3 (▲3.7)	35.3 (▽4.9)
Q1 2015	31.8 (▽7.2)	45.0 (▽8.9)	27.3 (▽12.2)	43.2 (▽4.1)	24.6 (▽14.8)	33.3 (▽22.1)	26.7 (▽12.3)	33.6 (▽11.1)	40.2 (▽11.6)
Q4 2014	39.0 (▲2.4)	53.9 (▲7.7)	39.5 (▲5.2)	47.3 (▲5.2)	39.4 (▲15.0)	55.4 (▲20.0)	39.0 (▲7.7)	44.7 (▲7.3)	51.8 (▲11.1)
Q3 2013	36.6 (▲4.0)	46.2 (▲1.1)	34.3 (▽1.4)	42.1 (▽4.3)	24.4 (▽7.1)	33.4 (▽11.0)	31.3 (▽1.8)	37.4 (▽1.0)	40.7 (▽4.8)
Q2 2014	32.6 (▲1.5)	45.1 (▽0.9)	35.7 (▲4.6)	46.4 (▲3.4)	31.5 (▲5.2)	44.4 (▲3.2)	33.1 (▲1.7)	38.4 (▽2.4)	45.5 (▲3.2)
Q1 2014	31.1 (▽10.8)	46.0 (▽12.2)	31.1 (▽14.9)	43.0 (▽20.1)	26.3 (▽21.2)	41.2 (▽21.4)	31.4 (▽14.2)	40.9 (▽3.3)	42.3 (▽19.3)

Note : Due to certain corrections, this peace index maybe slightly different from the peace index previously published.

### ***Policy Suggestion***

A very committed effort across a range of different subjects is needed to ease the sense of insecurity on inter-Korean relations and the political situation of the Korean peninsula:

First, many experts on N. Korea are concerned about the risk of inter-Korean relations deteriorating due to the joint S. Korea-US military exercise, S. Korea's general election, and N. Korea's Workers' Party Rally scheduled in March, April, and May 2016 respectively. Experts share the opinion that every effort should be made to stabilize the inter-Korean relationship especially for the first half of 2016.

Second, the government should keep pushing for inter-authority talks with the North to maintain 'the framework of North-South interaction' through which outstanding issues involving the two Koreas can be discussed. As someone said, 'interaction is required even during a war', and it is desirable to maintain the momentum for the North-South dialogue to improve the two Koreas' relationship along with international collaboration to tackle the issue of N. Korea's nuclear tests.

Third, flexibility in policies for N. Korea is a must. 'Strength against strength or tit for tat' actions between the two Koreas would not help change N. Korea's attitude, but can cause a negative effect to S. Korea's credit rating. Therefore, the government should exercise flexibility in dealing with N. Korea to avoid prolonged tension between the two Koreas.

## [Annex] Domestic and Global Economic Indices

### Global Growth Rate

Category	2013					2014					2015
	Annual	1/4	2/4	3/4	4/4	Annual	1/4	2/4	3/4	4/4	Annual(E)
US	2.2	2.7	1.8	4.5	3.5	2.4	-0.9	4.6	4.3	2.1	2.5
Euro Region	-0.4	-0.2	0.3	0.1	0.3	0.9	0.2	0.1	0.2	0.4	1.5
Japan	1.6	1.5	0.7	0.4	-0.4	-0.1	1.1	-1.7	-0.5	0.3	0.6
China	7.7	7.7	7.5	7.8	7.7	7.3	7.4	7.5	7.3	7.3	6.9

Note 1) IMF figures of January 2016 for 2015 global projections.

2) Annual rates were compared with those of previous term for the US and Japan, with the rates of the previous term for Euro region, and with the same term in the previous year for China.

### Economic Indicators of South Korea

Division		2013	2014			2015		
			the first half	the second half	Annual	the first half	the second half	Annual
National Account	Economic Growth rate (%)	2.9	3.7	3.0	3.3	2.3	2.8	2.6
	Private Consumption (%)	1.9	2.2	1.5	1.8	1.6	2.7	2.1
	Construction Investment (%)	5.5	1.9	0.4	1.0	1.2	6.5	4.0
	Facility Investment (%)	-0.8	7.5	4.2	5.8	5.4	5.0	5.2
	Intellectual Property Investment(%)	4.4	6.4	2.9	4.6	1.3	1.5	1.4
Foreign Trade	Current Account (100 million Dollars)	811	394	498	892	504	555	1,059
	Exports (100 million Dollars) [Increase rate, %]	5,596 [2.1]	2,832 [2.4]	2,895 [2.2]	5,727 [2.8]	2,685 [-5.2]	2,583 [-10.8]	5,268 [-8.0]
	Imports (100 million Dollars) [Increase rate, %]	5,156 [-0.8]	2,633 [2.7]	2,622 [1.2]	5,255 [1.9]	2,223 [-15.6]	2,142 [-18.3]	4,365 [-16.9]
Consumer Price (Average, %)		1.3	1.4	1.2	1.3	0.6	0.9	0.7
Employment rate (15~64, Average, %)		64.4	65.0	65.7	65.3	65.4	66.1	65.7

### Economic Indicators of North Korea

		2007	2008	2009	2010	2011	2012	2013	2014	2015
Per capita GNI (10,000 won)		104	114	119	124	133	137	138	139	-
Amount of Trade by Year (USD million)	South-to-North	1,033	888	745	868	800	897	521	1,136	1,262
	North-to-South	765	932	934	1,044	914	1,074	615	1,206	1,452
	Total	1,798	1,820	1,679	1,912	1,714	1,971	1,136	2,343	2,714

Source: THE BANK OF KOREA, Ministry of Unification.



# Hyundai Research Institute

## Current Status

HRI is established by Chung Ju-yung, the first CEO, founder and honorary chairman of Hyundai Group in 1986. HRI is a leading Korean research think tank committed to studying and analyzing the economic and industrial environment as well as reunification economy of Korea. HRI, further, has its own businesses such as business consulting, education and training service, and knowledge-content business.

## Main Research Topics

HRI is mainly composed of four divisions. The major working areas of each part are as following :

**Research Sector** deals with the macroeconomic issues relating to domestic-and-international economy as well as the industrial trends and issues. Reunification Economy Center is one of its sub-sectors, specialized in both the North Korean political and economic issues.

**Business Consulting Sector** devotes to helping domestic and international companies improve their competitiveness by providing strategic solutions.

**Knowledge-Business Sector** produces a great deal of invaluable online-and-offline contents such as educational videos and reading materials.

**Human Resource Development and Education Sector** provides HR development consulting services to companies for improved talent management, and also provides educational services such as training and lectures.

## Messages to Future-Cooperation Partner

HRI is prepared for cooperation and coworks with your institute, especially in the field of survey, economic trend analysis and business consulting. For more information on cooperation, please contact us.

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 Hyundai Research Institute

