

The Experiences of Currency Unification in Vietnam and Germany and Their Implications for the Two Koreas

Jin-Gil Jeong
Howard University
School of Business
Washington, DC 20059
jjeong@howard.edu
202-806-1657

Monetary Union Experiences in Vietnam

- Vietnam in 1975
 - unification with military power: Communist leadership tried to convert South Vietnam from MBE to CPE
 - hyperinflation, sluggish economic growth
 - per capita GNI in 1980 sharply decreased to USD 44 from USD 134 in 1979, and it took 12 years to recover to USD 138 in 1992. Ironically, they found that unified Vietnam has to return to MBE with an economic reform known as the “Doi Moi” policy in 1986, inspired by the success of economic reform in China which began in 1979. Thus, it took eleven years for the communist leadership to realize that the implementation of the idea of communism is flawed

Monetary Union Experiences in Germany

- Germany in 1990
 - unification with peaceful treaty
 - Leadership of unified Germany converted East Germany from CPE to MBE
 - With strong fiscal strength of West Germany helped East Germany
 - Yet high unemployment rate, high cost of welfare due to low productivity

Recent Euro zone experience with Monetary Union

- Minimize economic disparity
- (Maastricht) convergence criteria and stability pact
 1. inflation: no higher than 1.5% of average of 3 best countries
 2. annual government deficit to GDP: 3%
 3. Gross government debt to GDP: 60%
 4. Long-term interest rate: no higher than 2%

Still ongoing crisis triggered by fiscal discipline of PIGS countries

Economic disparity

- Per capita GDP/GNI
- South Vietnam 90% vs. North Vietnam 100% at unification in 1975
- East Germany 59% vs. West Germany 100% at unification in 1990
- North Korea 5.6% vs. South Korea 100% in 2009

How to alleviate the wide disparity between the two Koreas?

Table 1
Disparity between two Vietnams and two Germanys in economy and population
Pre-unification era

	Vietnam (in 1975)			Germany (in 1988)		
	South Vietnam	North Vietnam	Total	West Germany	East Germany	Total
Population (Million people)	23.1	24.5	47.6	61.7	16.7	78.4
Per capita GDP before the unification	NVND28 at current price (90%) NVND 305,790 at 1989 price	NVND32 (100%) NVND 310,669		DM36,300 (100%)	DM21,500 (59%)	
Productivity	1.0	1.1		1.7	1.0	

Table 2
Disparity between two Koreas in economy and population

	Aggregate GNI (US \$ in billions)			Per capita GNI (US \$)			International Trade (Exports + Imports) (US \$ in billions)		Population (million people)	
	South Korea	North Korea	%	South Korea	North Korea	%	South Korea	North Korea	South Korea	North Korea
2001	503.5	15.7	3.1	10,631	706	6.6				23.1
2002	576.2	17.0	3.0	12,100	762	6.3	31.4	2.3		23.3
2003	644.2	18.4	2.9	13,460	818	6.1	37.3	2.4		23.5
2004	724.5	20.8	2.9	15,082	914	6.1	47.8	2.9	48.0	23.6
2005	843.9	24.2	2.9	17,531	1,056	6.0	54.5	3.0	48.1	
2006	952.5	25.6	2.7	19,722	1,108	5.6	63.4	3.0	48.3	
2007	1,051.2	26.7	2.5	21,695	1,152	5.3	72.9	2.9	48.5	
2008	937.9	24.8	2.6	19,296	1,065	5.5	85.7	3.8	48.6	
2009	837.2	22.4	2.7	17,175	960	5.6	68.4	2.7	48.7	24.0

GNI: Gross National Income Source: Ministry of Unification, South Korea, United Nations Statistics Division, Conference proceedings of the 2011 International Conference on North Korean Economy (p 53) published by Korea Exim Bank

Recent literature

- Kwon (1997) recommended a transitory use of a dual currency system, rather than a single common currency immediately when there is an abrupt territorial and political unification.
- Hwang (2009) evaluated the costs and benefits of unification extensively.
- Choi et al. (2011) also predicted a 20% decrease in per capita output of South Korea in 25 years (medium run) with hypothetical scenarios of economic integration with or without political unification in 2015.

Recent literature

- Hwang and Chang (1997)
- Lee and Lee (1998) attempted to calculate an appropriate conversion rate from NKW to KRW when the two Koreas are unified with economic theories such as purchasing power parity (PPP),
- Rhee (2009) also investigated an appropriate conversion rate based on the PPP approach and the monetary approach.

Purpose of this paper

- No paper on how to alleviate economic disparity between two Koreas
- a feasible framework
- a binding agreement to alleviate the serious economic disparity between them
- Seek implications from the experiences of monetary union in Vietnam and Germany

The process of Vietnam

- Wealth confiscation during process of currency unification

Although purchasing power 1 SVND = 1 NVND

500 SVND = 1 LC

Table 7
The chronology of three -stage process of currency unification in unified Vietnam

Post-reunification				
	1 st stage	2 nd stage	3 rd stage	revaluation
	April 30, 1975 – Sep 28, 1975	September 29, 1975 – May 4, 1978	May 5, 1978	September 14, 1985
	Dual currency system	Dual currency system	Single currency system – unified currency	Single currency system
South Vietnam	SVND (South Vietnam dong)	LC (Liberation currency) LC was also known as Tien Ngan hang Vietnam (Bank of Vietnam currency)	UVND (unified Vietnam dong – unified currency)	1 new UVND = 10 old UVND Until early 1990s, experienced chronic hyperinflation
		Conversion rate: 500 SVND = 1LC	Conversion rate: 1 LC = 1.25 UVND (1 UVND = 0.8 LC) 500 SVND = 1.25 UVND 1 UVND = 400 SVND	
North Vietnam	NVND (North Vietnam dong)	NVND	UVND (unified dong – unified currency)	
			Conversion rate 1 UVND = 1 NVND	
Exchange rate		1 NVND = 1LC = 1US\$		

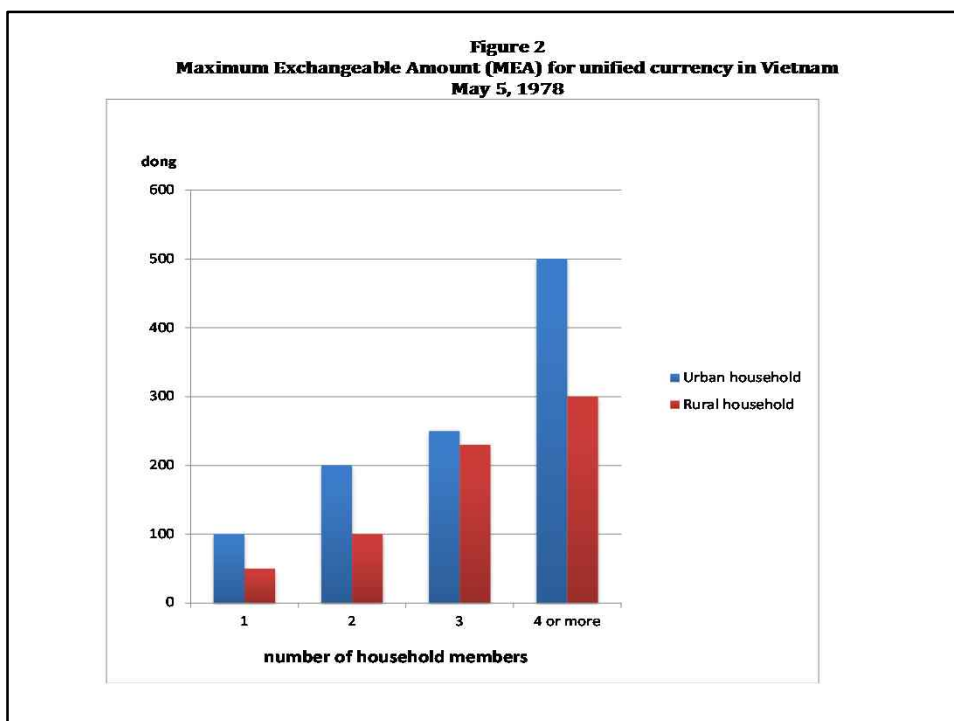


Table 7
GDP data of the unified Vietnam during the post-unification years

	Vietnam	
	Per capita GDP (in U.S. dollar)	Aggregate GDP (in billion U.S. dollar)
1975	80	3.8
1976	91	4.5
1977	106	5.3
1978	126	6.4
1979	134	7.0
1980	44	2.4
1981	34	1.9
1982	39	2.2
1983	66	3.8
1984	85	5.0
1985	79	4.7
1986	81	5.0
1987	84	5.2
1988	89	5.7
1989	95	6.2
1990	91	6.1
1991	107	7.2
1992	138	9.5
1993	180	12.7
1994	221	15.9
1995	284	20.7
1996	330	24.4
1997	351	26.4
1998	348	26.6
1999	363	28.2
2000	391	30.7
2001	404	32.2
2002	427	34.5
2003	475	38.9
2004	537	44.6
2005	617	51.9
2006	700	59.6
2007	800	68.9
2008	1,006	87.7
2009	1,032	90.9

The process of Germany

- Subsidy from West Germany to East Germany
- In the treaty, the two Germanys agreed that the non-convertible currency of East Germany (GDR)'s Mark (M) will be exchanged for convertible West Germany (FDR)'s Deutsche Mark (DM). The conversion rate for savings accounts of GDR residents was one to one (1M = 1DM) up to 4,000M for people between 15 and 59 years of age, 6,000M for older people, and 2,000M for younger people. The 1M = 1DM rate was also honored for wages, salaries, rents, leases and pensions of GDR residents.

Lessons from the experiences

- Abrupt economic integration due to abrupt unification without preparation– not desirable
- currency unification without economic integration creates more problems than answers.
- Gradual economic integration is more practical than abrupt integration because the wide disparity between two Koreas can be narrowed with a careful plan

Gradual Economic Integration

1. The precedence of China: Two economic systems for one country

- Chen et al. (1992) identified several key lessons from China's reform experience. The first lesson was the efficacy of gradual and partial reform, relating to the speed and comprehensiveness of reform. The second was importance of proximate, kindred economies as reform models and sources of resource transfer.
- From 1980, China began an important stage of its economic reform by establishing the special economic zones (SEZs) to attract foreign investment in Shenzhen, Zhuhai, and Shantou in Guangdong province, a neighboring region to Hong Kong.
- After 17 years of experiences with the SEZs, the Chinese government was able to maintain two economic systems –MBE for Hong Kong and transforming CPE for China- for one country without any disruption when the U.K. transferred the sovereignty of Hong Kong to China in 1997. Although Hong Kong and mainland China had had two alternative economic systems, the two economies were steadily integrated while maintaining their own systems.
- South Korea is proximate, kindred economies as reform models and sources of resource transfer for North Korea
- DMZ issue – initially travel restriction from North to South – less disruption

Gradual Economic Integration

- **2. Cooperation and Kaesong Industrial Complex (KIC)**

- KSP and KIC –usefulness for economic integration

- KIC
manifestation of economic interdependence
deterrence for conflict

Gradual Economic Integration

2. Cooperation and Kaesong Industrial Complex (KIC)

- The Kumgang Sightseeing Project(KSP) had suspended since 2008 due to the death of a South Korean tourist by North Korean soldier.

- However, it is interesting to observe that the KIC is thriving very well with some negligible setback when North Korea was blamed for the torpedo attack of a South Korean navy ship in 2010, killing 46 navy sailors, and for the artillery attack on Yonpyong Island in 2010 – Real cooperation – practical economic integration

- With the unfortunate incidents, we are able to discern the degree of interdependence between the two Koreas with the KSP and KIC. It is obvious that the interests of the two Koreas are more interdependent with the KIC than with the KSP

- Thus, for the gradual economic integration, the two Koreas must agree to establish more KICs in North Korea. The major advantage of the KIC is proximity, easy to connect infrastructure such as road, railroad and electricity. In that regard, it might be a good idea to establish several KICs just north of the DMZ.

- the side benefits of the idea, if implemented, are a manifestation of South Korea for non-aggression and the deterrence of confrontation from North Korea. The electricity needed at the KIC has been supplied by South Korea. The electricity might be leverage if North Korea does not honor the contract duly.

Table 8
Summary statistics on Consignment Processing
Kaesong Industrial Complex

Year	2005	2006	2007	2008	2009	2010
Amount of production (in million US\$)	14.9	73.7	184.8	251.4	256.5	323.3
Number of North Korean employees	7,621	11,189	22,538	38,931	42,561	46,284
Number of South Korean employees						

Source: Ministry of Unification, Korea

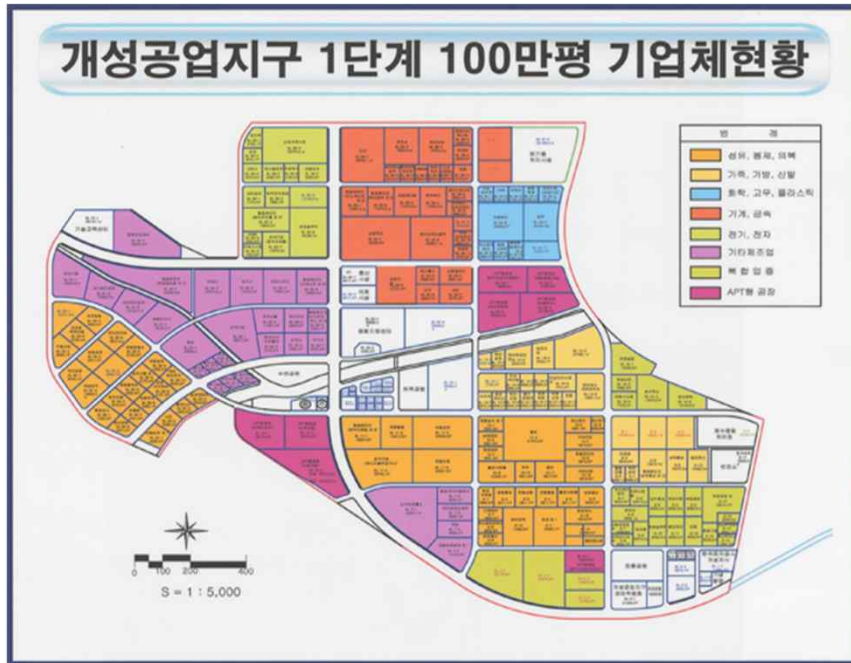


Table 9
North Korea's Structure of Economy

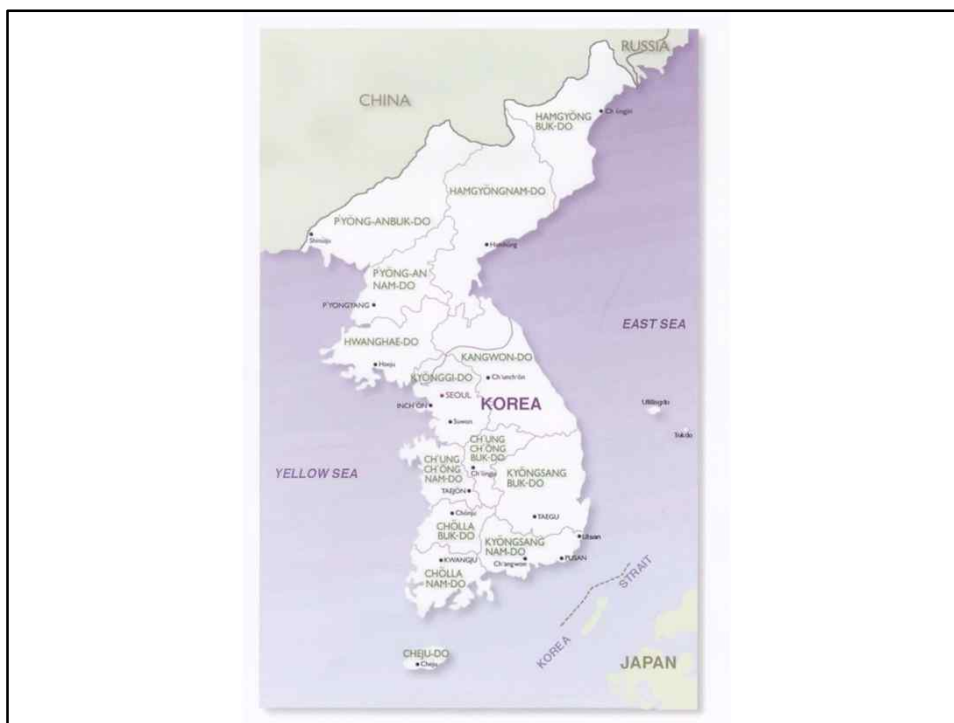
	Agriculture, hunting, forestry, fishing (ISIC A-B)	Mining, Utilities (ISIC C &E)	Manufacturing (ISIC D)	Construction (ISIC F)	Other Activities (ISIC J- P)
1995	0.20	0.16	0.23	0.08	0.33
1996	0.21	0.15	0.22	0.07	0.35
1997	0.22	0.14	0.19	0.07	0.38
1998	0.23	0.13	0.19	0.06	0.38
1999	0.24	0.14	0.19	0.07	0.35
2000	0.23	0.14	0.19	0.08	0.35
2001	0.23	0.15	0.19	0.09	0.34
2002	0.24	0.14	0.19	0.09	0.34
2003	0.24	0.14	0.19	0.10	0.33
2004	0.25	0.14	0.19	0.09	0.33
2005	0.25	0.14	0.19	0.10	0.32
2006	0.25	0.15	0.19	0.09	0.33
2007	0.23	0.15	0.20	0.09	0.34
2008	0.24	0.15	0.20	0.08	0.33
2009	0.24	0.15	0.19	0.09	0.33

Data: United Nations, ISIC: International Standard Industrial Classification

Gradual Economic Integration

3. The Need for Master Development Plan of North Korea

- the two Koreas have to cooperate in preparing for a bidding master development plan of North Korea. – burden of huge cost alleviated by inch by inch for many years
- Ahn (2011) surveyed the railroad system of North Korea and suggested the necessary update to be consistent with South Korean railroad system. When the North Korean railroad system is updated, it is possible for the South Korean railroad system to be connected to Trans-Russia System (TRS) and Trans-China System (TCS), and thus improve logistics of exports to European Union countries with which South Korea signed the Free Trade Treaty. As we know, the North Korean railroad is already updated from South Korea to the KIC in Kaesong area.
- Park et al. (2007) described strategies in detail for the industrial development of North Korea based on a geographical approach. Schwekendiek (2009) also reported the data atlas of North Korea with detailed data such as regional population, demography, society and economy in North Korea.
- According to Park et al. (2007) and Schwekendiek (2009), it seems reasonable to adopt the gradual approach of development implemented by China.
- begin with the coastal area and move into the mountainous inland area. The majority of the North Korean population lives either along the coastal area or the metropolitan area of Pyongyang, the capital city.



Gradual Currency Unification

1. Use of South Korean won as settlement currency for all intra-peninsular transactions

- Jeong et al. (2010) argued that the use of South Korean won for settlement currency for all intra-peninsular transactions will accelerate economic integration between two Koreas. For the companies in South Korea, they no longer assume foreign exchange rate risk. The intra-peninsular trade will be an extension of domestic trade without much hassle.
- When the intra-peninsular trade began in early 1990s, due to the reluctance of North Korea for a direct trade, most trades between South Korea and North Korea was being carried out using the third country intermediary or broker.
- After 20 years of experience with the intra-peninsular trade, the direct trade between South Korea and North Korea has steadily increased. In fact, direct trade, eliminating third country broker, was a norm for most recent intra-peninsular trade, until South Korea enforced its embargo for all trade with North Korea effective in May 2010 due to a torpedo attack incidence.
- Thus, the rapidly changing mode of trade implies that there has been gradual economic integration based on trust and customer relationship, which are important components of the MBE.
- The experience of using South Korea won for trade might be awkward for North Korea initially. Like the mode of trade, as time progresses, unfamiliarity of using South Korean will be steadily disappeared, and the economic integration of the two Koreas will be accelerated.

Gradual Currency Unification

- **2. Circulation of South Korean won in the KIC**
- For economic development
- (high quality) Labor – communism - education/training
- Capital
- North Korea
- Real sector vs. Financial sector (Big problem)

Lack of solid monetary system

Lack of solid banking system

Limited in raising capital

KIC – use of South Korean won banking system – savings –
creation of credit – increased liquidity- enlargement of capital –
reserve requirements

Wages

- As of May 31, 2011, the number of North Korean employees is 47, 172. According to the report, average wage per each employee is approximately \$1,200 (US dollar) a year. In total, it amounts to about \$57 million a year. At current exchange rate, the amount is equivalent to about 60 billion South Korean won (KRW).

Gradual Currency Unification

2. Circulation of South Korean won in the KIC

- Kim (2009) also reported that the trust of North Korean residents in banking system is extremely low.
- In order to restore the confidence in money and banking system in North Korea, it might be a good idea for North Korea to circulate South Korean won in KIC as a distribution coupon. For example, when South Korean employers may need to increase the compensation of North Korean employees in the future, the BCSD may demand the additional amount in South Korean won either in cash or credit, using the current exchange rate between South Korean won and US dollar.
- Once the employees at KIC understand the South Korean won can serve a store of value, more South Korean won will be deposited into the North Korean savings bank as the employees consume less for future consumption. As North Korean savings bank receives deposits from employees, the bank may create more liquidity except reserve requirements.
- With the additional liquidity, the communist leadership can purchase more foods and consumer goods from South Korea and may resolve the issue of famine.
- By doing so, the benefit for North Korea is to get some idea on levels of prices and how to control hyperinflation with the steady value of South Korean won. Another benefit is to help establish a commercial banking system, which exists on paper but not in reality in North Korea.

Gradual Currency Unification

3. Finding an implicit exchange rate

- Jeong et al. (2010) argued that it is necessary for North Korea to adopt fixed exchange rate regime and the anchor currency for peg should be South Korean won. The rationale for that is that South Korea will be its major export market and conspicuous difference in the cost of labor. Furthermore, with respect to the impossible trinity of exchange rate policy, North Korea can maintain autonomy of its economic policy and achieve stability of the value of its currency while it has to give up financial integration imposing capital controls. In fact, financial integration with the rest of the world is premature for North Korea because it may take several decades for them to eliminate capital controls by building up reserve currency.
- The precedence of China also provides a valuable empirical evidence for North Korea. Specifically, China initially pegged the value of its currency to US dollar with the following reasons: the U.S. is its major export market for growth in real sector and striking difference in the cost of labor and thus cost of products. Thus, it is rational for the communist leadership of North Korea to peg the value of its currency to South Korean won
- While Vietnam and Germany experienced a lot of disruption in economic activities with the arbitrary conversion rates, which were not based on economic rationale, but based on political consideration, an appropriate exchange rate may facilitate gradual economic integration of the two Koreas, rather than bring a disruption in economic activities.
- At the KIC, the benefit of circulating South Korea won in lieu of distribution coupon, along with North Korean won, is that an implicit exchange rate may emerge reflecting the purchasing power of the two wons. It may take quite some time to be confident with the exchange rate, the rate might be a better guidance than official government rate or black market rate.

Gradual Currency Unification

4. Won-ization

- It will be reasonable to think that unified Korea will adopt South Korea won as a legal tender on the Korean peninsula considering the difference in the size of economy, the size of trade, and the size of population. The process of the won-nization, the universal use of South Korean won as an official tender on the Korean peninsula, will be dependent upon political situation.
- A critical question in that situation is how to handle North Korean won. The holdings of North Korean won by middle class residents in North Korea will not be large. Thus, it seems reasonable to exchange North Korean won for South Korean won with a maximum limit as unified Germany did.
- Like dollarization by many countries such as El Salvador and Ecuador, an easiest route is a declaration by North Korea: a unilateral adoption of South Korean won as an official tender for all transactions in North Korea.
- The second route will be the gradual expansion of the use of South Korea won in several industrial complexes, such as the KIC, to be established by the cooperation between two Koreas. The use of South Korean won will play many roles. First, it will function as distribution coupon – a medium of exchange and a unit of exchange. In doing so, the concept of price expressed in KRW will be no longer ambiguous. Second, it will function as a store of value. As North Korean employees at the industrial complexes deposit the money into the savings account, creating additional liquidity for the government.

Conclusion

- The empirical evidence of sudden currency unification without economic integration had not been positive, creating confusion, high unemployment rate, inferiority, etc.
- Thus, considering the economic disparity of the two Koreas at this time, the political leadership of two Koreas has to realize that it is rational for the Korean peninsula to achieve gradual economic integration with a binding master plan. The master plan could be drawn by mutual agreement such as “grand bargain” and/or by arbitration of international institution such as the United Nations.
- Furthermore, the economic integration can be achieved with the idea of “one country with two economic systems.” The precedence of China provides a good guidance. China implemented the idea for mainland China and Hong Kong with some restriction on inter-regional travel initially. The two different economies now appear to be being integrated very smoothly without any major interruption. In that regard, the existence of DMZ might be useful to control the intra-peninsular travel, preventing the two Koreas from all social problems as experienced in unified Germany.
- In conclusion, regardless of ups and downs of the political relationship of the two Koreas, the process of gradual economic integration, based on a binding master plan, must continue without any interruption.
- Gradual economic integration may pave a way to peaceful coexistence and peaceful unification with a binding agreement between the two Koreas.
- the gradual economic integration should be accompanied by the process of currency unification with mutual agreement by the two Koreas.