# The Current Relations between Two Koreas and Matter-Energy, Information Flow

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#### **Abstract**

Recently, two Koreas try to improve relations with each other in many subsystems. That development, in the exchange of matter-energy and information in many subsystems, is expected in the long run to contribute to achieving the reunification of Korea. In this sense, it is very significant to take a close look at the subsystems that process the matter-energy and information in the current relations between South and North Korea.

**Keywords:** Subsystems, matter-energy, information, relation, South-North Korea

It is well known that the exchange in non-political areas have influenced on the relations improvement in the political area between two Koreas. Subsystems that process the matter-energy and information between two Koreas have interconnected with each other. It is very important to examine recent developments in regard to the South-North relations focused on exchange of matter-energy and information. Especially the exchange shift of matter-energy and information from 2002 to 2005 marks an epoch in the history of the relations between two Koreas.

# The Flow of Matter-Energy and Information Between two Koreas

Since the inauguration of the Roh Moo-hyun administration, stated its position to promote in earnest the establishment of peace on the Korean Peninsula through the Policy of Peace and Prosperity, there has been an increase in inter-Korean dialogue and exchanges of people and goods. The scope of inter-Korean relations has become diverse and the contents of the talks have become more detailed and specialized to make the relations more substantial in nature. Inter-Korean visits have also expanded. The number of visitors for both sides was 13,877 in 2002 and 88,341 in 2005. In 2005 the number people crossing over the military demarcation line reached 88,341, surpassing the 80,000 mark for the first time. Inter-Korean exchanges and cooperation have led to a substantial improvement in inter-Korean relations, including laying the foundation for the formation of a Korean national community, fostering the proper atmosphere for the settlement of the North Korean nuclear issue, building military confidence, and easing tensions. In addition to expanding social and cultural exchanges and raising people's awareness of North Korea, inter-Korean economic cooperation is exerting a positive influence on the overall state of inter-Korean relations.

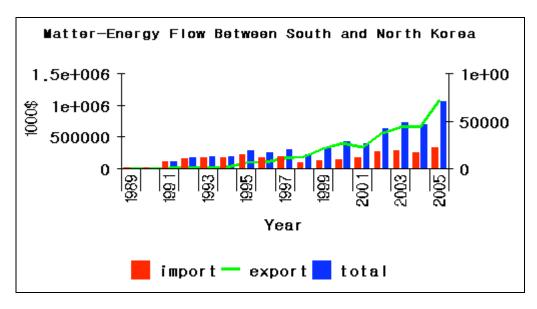
The recent situation on the Korean peninsula, as the table 1 suggested, shows the consistent growth in the flow of matter-energy(based on the annual intra-Korean trade data) and information(based on the annual exchange of people which is the most important information source), as the table 2 suggested. This vivid growth can be able to lower the level of entropy in North Korea which gradually increase to decrease order and ultimately to improve inter-Korean relations by promoting peace, reconciliation, and cooperation more than the urgent political change.

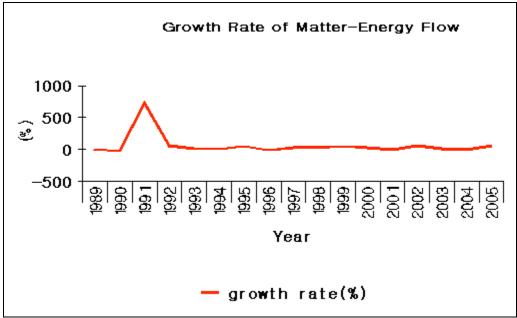
In the early years, inter-Korea trade mainly took the form of indirect trade through third countries. Beginning in the mid-1990s, the share of direct trade rose in areas of oriental medicine, agricultural products and some items for processing deals, as a result of direct agreements between the North and South Korean parties.

Table 1 Overview of Intra-Korea Trade(In \$1,000)

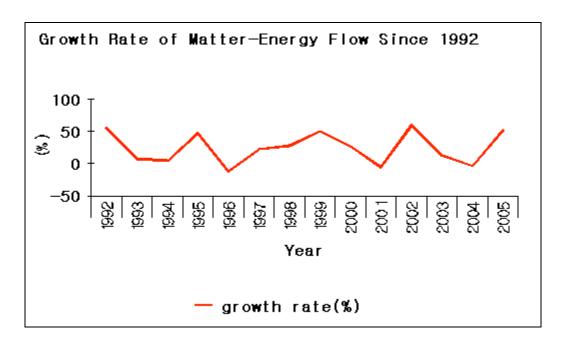
	Import	Export	Total	Growth rate (%)
1989	18,655	69	18,724	
1990	12,278	1,188	13,466	-28.1
1991	105,719	5,547	111,266	726.3
1992	162,863	10,563	173,426	55.7
1993	178,167	8,425	186,592	7.6
1994	176,298	18,249	194,547	4.3
1995	222,855	64,436	287,291	47.7
1996	182,400	69,639	252,039	-12.3
1997	193,069	115,270	308,339	22.3
1998	92,264	129,679	221,943	-28.1
1999	121,604	211,832	333,437	50.2
2000	152,373	272,775	425,148	27.5
2001	176,170	226,787	402,957	-5.3
2002	271,575	370,155	641,730	59.2
2003	289,252	434,965	724,217	12.9
2004	258,039	439,001	697,040	-3.8
2005	340,281	715,472	1,055,753	51.5

The emphasis of inter-Korean relations was on inter-Korean exchanges and cooperation in the economic and military spheres to build confidence and reduce tensions. In 2005, the number of visitors to North Korea, excluding tourists to Mt. Geumgang was 87,028, the largest number in a single year since visits to North Korea were first approved in 1989. This is a 232% increase compared to the total of 26,213 visitors the previous year. The increase is mainly due to a sharp rise in visits for economic purposes, including the construction of the Gaeseong Industrial Complex. The number of North Korean residents visiting South Korea remained at 1313, a 309% increase compared to 321 visitors the previous year. The total number of inter-Korean visitors was indicating steady growth.





In the long-term view, the growth rate of matter-energy flow between South and North Korea seems to be consistent in the framework of consistent growth in quality. It is said that the relations between South and North Korea is somewhat stable in matter-energy flow.



But in the short-term view, the growth rate of matter-energy flow between South and North Korea seems to be recycling every three years.

**Table 2 Overview of Intra-Korean Interchange of People (person)** 

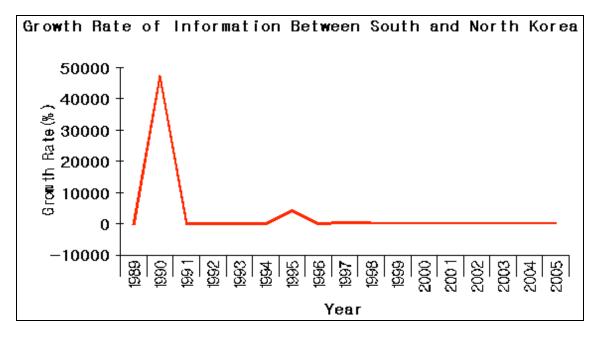
Year	Visit Type	Applications	Approvals	<b>Actual visits</b>	<b>Total visits</b>	Growth rate
1989	To North Korea	1	1	1	1	(%)
	To South Korea	-	-	1	1	
1990	To North Korea	199	187	183	474	47300
	To South Korea	306	306	291	4/4	4/300
1991	To North Korea	244	243	237	410	-13.1
	To South Korea	175	175	175	412	
1992	To North Korea	303	257	257	362	-12.2
	To South Korea	113	103	103		
1993	To North Korea	21	19	18	24	-93.4
	To South Korea	6	6	6		
1994	To North Korea	78	54	12	12	-50
	To South Korea	-	-	-		
1995	To North Korea	563	543	536	536	4367
	To South Korea	7	7	-		
1996	To North Korea	249	170	146	146	-72.8
	To South Korea	_		_	146	
1997	To North Korea	1,194	1,172	1,015	1015	595
	To South Korea	-	-	-	1013	

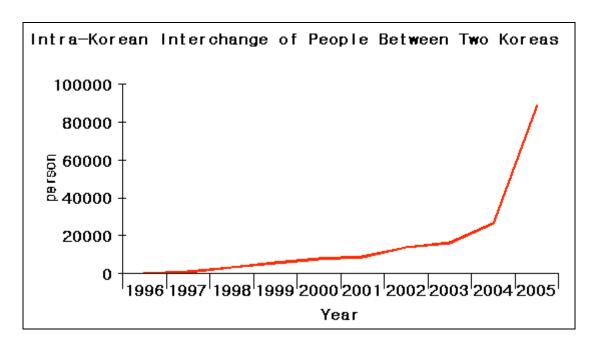
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1998	To North Korea To South Korea	3,980	3,716	3,317	3317	227
1999	To North Korea To South Korea	6,199 62	5,997 62	5,599 62	5661	71
2000	To North Korea To South Korea	8,070 706	7,737 706	7,280 706	7986	41
2001	To North Korea To South Korea	9,148 191	8,805 191	8,551 191	8742	10
2002	To North Korea To South Korea	13502 1120	12979 1120	12825 1052	13877	58.7
2003	To North Korea To South Korea	16161 1023	15697 1023	15280 1023	16303	17.5
2004	To North Korea To South Korea	30455 363	29410 363	26213 321	26534	62.8
2005	To North Korea To South Korea	98945 1313	97464 1313	87028 1313	88341	233

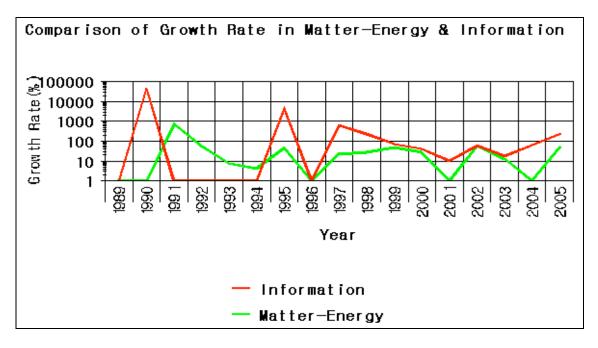
\_This figure excludes Mt. Kumgang tourists.

In the long-term view, the growth rate of information flow between South and North Korea seems to be consistent in the framework of consistent growth in quality. But in the short-term view since 1989, the growth rate of information flow between South and North Korea seems to be recycling irregularly.





In the long-term view, the growth rate of information flow between South and North Korea seems to be consistent until 1996 in the framework of consistent growth in quality. But since 1997, the growth rate of information flow between South and North Korea seems to upsurge.



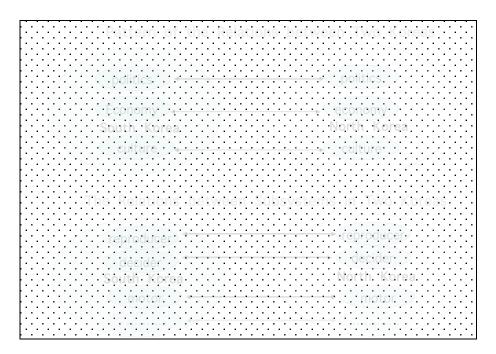
Firstly, we can see the structural fluctuations in relations between South and North Korea in these figures. Especially if compared to growth rate in information and matter-energy, we will find out that the growth rate in information run faster than that one in matter-energy until 1991, then from 1991 to 1994 the growth rate in matter-energy run faster than that one in information. Also we can see that the growth rate in information indicates

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more higher than that in matter-energy from 1995 to 2005. In the relation-improvement between two Koreas, two Koreas have recognized the relative advantage of information in relation to matter-energy. Especially in spite of crisis over North Korea's nuclear program, exchanges of people and merchandise between the two Koreas are taking place routinely, almost on a daily basis. Inter-Korean travel routes are open on land and sea and in the air.

Secondly, we can see in figures that the structural change in relations between South and North Korea is somewhat linear. Thus the political environment around the Korean peninsula seems to be more stable than in the 1980's. In this point the relation between South and North Korea would co-evolve with that environment. Specially if compared to growth rate in information and matter-energy, we will find out that the growth rate in information run faster than that one in matter-energy from 1989 to 1994, then since 1995 both run almost similarly. This fact shows that two Koreas recognized the relative advantage of information in relation to matter-energy but focused on the flow of matter-energy.

# A Distinct Subsystem in View of the Recent Relations between Two Koreas



As a evident example of subsystems, The South-North Transit Office is a channel and net in charge of the operation of inter-Korean railroads and roads, consultations and contacts with North Korea about operating vehicles between the South and the North, The Transit Office also performs inter-Korean entry/exit procedures including customs inspections, immigration and quarantines when people travel between the two Koreas either by road or railroad on the Gyeongui and Donghae Lines and when goods are brought in and out. The South-North Transit Office has many roles, addressing emergency situations in inter-

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Korean transits, approving operation of transportation equipment between the two Koreas, and accepting applications for bringing goods in and out.

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