ISSUE 13
KOTI Knowledge Sharing Report

KOREA'S BEST PRACTICES
IN THE TRANSPORT SECTOR

SAEMAUL UNDONG

The Driving Force of Korea's Economic Growth:

Saemaul Undong and Transport Infrastructure Expansion

by KIM Ju Young and JUNG Byung-doo

KOTI THE KOREA TRANSPORT INSTITUTE

Korea's Best Practices in the Transport Sector

The Driving Force of Korea's Economic Growth: Saemaul Undong and Transport Infrastructure Expansion

ISSUE 13

KOTI Knowledge Sharing Report

Korea's Best Practices in the Transport Sector

The Driving Force of Korea's Economic Growth:

Saemaul Undong and Transport Infrastructure Expansion

by KIM Ju Young and JUNG Byung-doo

KOTI THE KOREA TRANSPORT INSTITUTE

KOTI Knowledge Sharing Report: Korea's Best Practices in the Transport Sector

Issue 13: The Driving Force of Korea's Economic Growth:
Saemaul Undong and Transport Infrastructure Expansion

by KIM Ju Young and JUNG Byung-doo

Published by The Korea Transport Institute (KOTI)
315, Goyangdaero, Ilsanseo-gu, Goyang-si, Gyeonggi-do 411-701, Republic of Korea
Phone +82-31-910-3114
Fax +82-31-910-3222
Hompage: www.koti.re.kr
Contact email: info@koti.re.kr

Price 15,000 Korean Won
ISBN 978-89-5503-624-4 93530

• Authors

KIM Ju Young

Dr. Kim has been involved in the Department of Transport Infrastructure Investment Analysis at the Korea Transport Institute (KOTI). He received a Ph.D. in Transportation Planning at Seoul National University in South Korea. His major research areas have focused on the establishment of a national transport database including development of dynamic O/D estimation theory and analysis of transport infrastructure investment. His research work is published in various journals such as Journal of Korean Society of Transportation, Transportation Research Record, and Expert Systems with Applications. He has long served the Ministry of Land, Infrastructure and Transport for transport policy development and was awarded for his research contributions from the Korean Society of Transportation.

JUNG Byung-doo

Dr. JUNG has been involved in the Department of Transport Engineering at Keimyung University. He received a Ph.D. from the Department of Civil Engineering in Osaka City University, Japan. He worked a year in the Northland Advanced Transportation Systems Research Laboratory at University of Minnesota as a visiting professor. His major research areas have focused on transportation modeling, sustainable transport, urban transit systems and technology. His research has been published in various journals such as the Journal of Korean Society of Transportation and the Journal of the Korea Planners Association.

• Contents

List of Tables

• List of Figures

• Preface

Korea has achieved phenomenal growth over the past 40 years based on its consistent construction of transport infrastructure such as roads, railways, airports and ports. The nation kept expanding the transport infrastructure while implementing its Five-Year Economic Development Plans. It even introduced a special account designed to facilitate the installation and maintenance of transport facilities. Such a development scheme, which has made it possible for Korea to attain the status of a developed country, is now being closely watched by the world.

Korea has turned itself into an aid donor after being a recipient of international aid until the 1990s. This has not only promoted Koreans' self-esteem but enhanced the nation's image in the global community, particularly among developing countries. Korea is now providing aid to countries in Africa, the Middle East and South America as well as in Asia. The scope of support is also expanding to cover economic development planning and various other areas such as new town construction, infrastructure expansion and policy consultation.

Recently, numerous developing countries are showing a keen interest in the development of transportation in Korea. Equipped with the world's highest level of information and communications technology, Korea is building up its intelligent transportation systems (ITS). It has also reformed its public transport system featuring a bus rapid transit (BRT), convenient transfer scheme, and transit cards that provide nationwide compatibility. Other prominent achievements include the development of domestic technologies for high-speed railway systems and the operation of a world renowned international airport. As such, Korea is considered to be a role model by a growing number of developing countries.

The driving force of such remarkable developments in Korea is Saemaul Undong. It is also frequently translated as New Community Movement or New Village Movement. Started in the 1970s, it is a significant movement that characterizes Korean society. The movement represents not just rural

community development projects, but also signifies a modernization effort exerted throughout Korean society, affecting all the aspects of Korean lives involving factories, cities, workplaces and industrial infrastructure.

Investment in road construction, which started as part of efforts to recover from the devastation caused by the Korean War, played a crucial role in achieving rapid economic growth. The nation's transport infrastructure was developed through comprehensive national territorial development programs as well as Five-Year Economic Development Plans. Actively implemented during the nation's industrialization process, the infrastructure expansion laid the groundwork for rapidly promoting economic growth.

Saemaul Undong has become an international movement from the 2000s, presenting a development model for developing countries. A considerable number of trainees from these countries have received education related to Saemaul Undong here in Korea. After returning home, they are devoting themselves to the task of promoting the development of their countries.

The Korean government has recently proposed launching a second Saemaul Undong. It represents the desire to further develop Saemaul Undong as a future-oriented civic awareness reform movement. This will require revising the relevant contents and implementation methods based on analysis of the current status of Korean society.

This book is designed to introduce Saemaul Undong and the related expansion of transport infrastructure. It will surely help provide a ray of hope for many countries around the world. This book represents our determination to share Korea's precious experience and know-how with numerous countries, thereby laying the foundation for creating new values in the global era.

Kim Gyeng Chul
President
The Korea Transport Institute

CHAPTER 1

Overview of the Study

1. Background and Purpose of the Study

Saemaul Undong is a social movement that started the process of rural modernization in the 1970s. It was aimed at increasing the income of agricultural households and improving living conditions and production infrastructure based on promoting diligence, self-help and cooperation. The movement represents the most successful model adopted by the state for the development of local communities.

In the 2000s, Saemaul Undong had become internationalized to the extent that developing countries have adopted it as a national development model. Localized Saemaul Undong projects are being steadily staged in such countries. They are often led by people who have received relevant training on Saemaul Undong in Korea.

This study reviews the evolution of Saemaul Undong as well as its achievements. It also analyzes the processes of building transport infrastructure and implementing economic development programs in relation to the movement. The findings will be shared with relevant international organizations in an effort to find new ways of promoting cooperation to ensure development of the global community.

Conducted as a KSP (Knowledge Sharing Program) project, this study is also designed to introduce Saemaul Undong, examine how the movement impacted the expansion of transport infrastructure and growth of the

national economy.

This study is particularly aimed at giving practical help to developing countries in devising and implementing development strategies. To accomplish this objective, it analyzes the transport infrastructure and economic growth projects implemented through comprehensive national territorial development programs and Five-Year Economic Development Plans.

2. Scope of the Study

The Birth of Saemaul Undong and Its Development Process

- Saemaul Undong's birthplace in Sindo Village, Cheongdo County, North Gyeongsang Province, and the history of the movement and background information
- The concept of Saemaul Undong, its guiding principles, and its functions
- The evolution of Saemaul Undong and changes in its functions and characteristics

Saemaul Undong's Achievements

- Production infrastructure projects, such as those aimed at building rural roads, improving villages, and constructing roads through inter-village cooperation
- Saemaul Undong investment from various sources as well as government subsidies
- Saemaul Undong's contribution to the economy recovery campaign in the 1980s and 1990s, and an outlook on the new Saemaul Undong and relevant ODA projects in the 21st century

Territorial Development and Economic Growth

- Implementation of the Comprehensive National Territorial Development Plan from its first period (1972-1981) to the fourth period (2006-2020), and its relationship with economic development plans

- Changes in national infrastructure, focusing on road and railway facilities
- Changes in the transport administrative organization with regard to policy continuity related to government organizational restructuring

Expansion of Transport Infrastructure and Economic Development

- Changes in road and railway traffic conditions in relation to the implementation of the Five-Year Economic Development Plans, from the first period (1962-1966) to the seventh period (1992-1996)
- Analysis of upward trends in transport infrastructure investment around the year 2000
- Korea's industrialization in relation to its infrastructure development and economic growth achieved over the past 60 years

CHAPTER 2

Evolution of Saemaul Undong

1. The Birth of Saemaul Undong

Beginning of Saemaul Undong

Saemaul Undong dates back to April 22nd, 1970, when President Park Chung Hee proposed a new community movement, calling for self-help efforts to change rural villages.

When the proposal for Saemaul Undong was made in 1970, the government was in financial difficulty. However, it decided to promote 10 major projects designed to improve the environments of rural communities. The decision was based on the awareness that given assistance, the residents would be able to improve the living conditions of their villages through cooperation.

The achievements of the initial projects exceeded expectations at 16,600 villages, nearly half of the nation's total rural communities. There were many villages where the residents achieved their long-desired projects by pooling their financial resources and labor force.

Background to the Birth of Saemaul Undong[1]

The direct and most fundamental motive for Saemaul Undong was the economic need. The nation's GDP growth rate averaged 9.6% during the

1960s and 1970s. However, the agricultural sector expanded at an average annual rate of just 3.5%. During the 2nd Five-Year Economic Development Plan period (1967-1971), the national GDP increased 10.5%. The mining and manufacturing sector, in particular, posted an expansion rate of 20.3%. In contrast, the agricultural and fisheries sector achieved a mere 2.3% rate of growth. Between 1965 and 1969, the urban household income jumped by an average of 14.6%, yet the household income in the agricultural communities rose just 3.5%.

In the late 1960s, Korea needed to map out a new strategy to cope with abrupt changes in international economic environments, such as shifts in US external economic policies, oil price hikes, and food crises. It was particularly necessary for the nation to reform its economic structure from being heavily dependent on external factors and the agricultural sector.

Cities accounted for 39.2% of the nation's total population in 1960, but the ratio rose to 50.2% in 1970. The continued migration of people from rural areas to cities weakened the structure of agricultural communities, which led to shortages of infrastructure necessary for their daily lives. Consequently, the need arose for the government to tackle these problems.

Cheongdo, the Birthplace of Saemaul Undong

In 1957, Sindo Village in Cheongdo County of North Gyeongsang Province, launched a campaign to improve its living standards. The diligent and cooperative residents voluntarily implemented various projects, beginning with the construction of agricultural roads. The village set an example for community reform movements, eventually serving as a model for Saemaul Undong.[2]

1) Based on 10-year History of Saemaul Undong by the Ministry of Home Affairs (1980) and 40-year History of Saemaul Undong by the National Council of Saemaul Undong Movement in Korea (2012).

2) Saemaul Undong's Birthplace, Cheongdo: The 42-year history of Saemaul Undong (1969-2011), Cheongdo County (2012).

Figure 2.1 Agricultural road construction underway in Sindo Village of Cheongdo County (1957)

- 1st project (1957) - Agricultural roads 4 meters in width and 2,500 meters in total length, were built. A running total of 1,810 people participated in the project which lasted 43 days.
- 2nd to 8th projects (1959-1967): Projects were carried out to improve household and village conditions as well as promote side businesses.

Cheongdo County erected a commemorative hall in Sindo Village in April 2009. The additional following projects have been completed or are underway to develop the village as a tourist spot with regard to Saemaul Undong:

- Commemorative Hall Project: July 2006 - April 14, 2009
- Saemaul Birthplace Maintenance Project (Ministry of Security and Public Administration, 2009-2014)
  - · Saemaul Undong Sanctification Project (presidential train, statue, restoration of Singeo Station, rice mill, etc.)
  - · Construction of an experiential learning center related to Saemaul Undong
  - · Saemaul art, maze, restoration of brooks, story roads, etc.
- Sindo Village Agriculture Theme Park Project (Ministry of Agriculture, Food and Rural Affairs, 2010-2014)
  - · Establishment of symbolic spaces, folk village, ecology park, infrastructure facilities, etc.

Figure 2.2 The entrance to Saemaul Undong's birthplace in Sindo Village of Cheongdo County (left) and the Commemorative Hall (right)

2. Saemaul Undong's Concept and Guiding Principles

Etymological Meaning of Saemaul Undong

The term "Saemaul" is a compound word that is made up of Sae, which means "new" or "better," and Maul, which refers to a neighborhood as a regional or social community unit. This signifies that the movement aims for the creation of new communities directed toward the following objectives:

Reform movement: Saemaul Undong pursues change to create a new era and environment free from the misery and poverty of the past. In this regard, it can be called a reform movement oriented toward change and progress.

Community movement: The village, a community that shares traditional values, has been set as the basic unit for Saemaul Undong. In this regard, it can be called a community development movement aimed at improving the living standards through innovation of the community.

Saemaul Undong's Guiding Principles

Saemaul Undong has selected diligence, self-help and cooperation as its guiding principles required to facilitate the implementation of various community development projects.

- Diligence: Indomitable pioneering spirit necessary for implementing various challenging tasks while ensuring the values of diligence, consistence and frugality
- Self-help: A core principle for practical implementation of movement projects based on the values of autonomy, self-reliance and confidence
- Cooperation: A practical value necessary for improving productivity through the build-up of self-capacity, emphasizing the community spirit of reconciliation and unity

Figure 2.3 The Saemaul flag and its meanings

- The green base symbolizes green revolution
- The yellow circle represents cooperation, wealth and infinite potential
- The green bud symbolizes the nucleus, hope and income, with the three leaves representing the spiritual values of diligence, self-help and cooperation
- The stem, which gets thicker toward the bottom, symbolizes stability and prosperity

The Nature and Functions of Saemaul Undong

Saemaul Undong pursues various ideals and goals aimed at attaining economic prosperity. More fundamentally, however, it has the nature of a national campaign designed to improve social communities, reform the mental and spiritual attitudes of the public, and address the problems confronting the nation.

Important functions of Saemaul Undong can be summarized as follows:

- Political functions: A campaign designed to overcome national difficulties, accelerate the process of increasing national power, realize peaceful unification, promote national unity, and pursue national reconciliation
- Economic functions: A campaign to expel poverty, increase income and productivity, promote frugality and savings, improve public welfare, and reduce costs, ultimately aiming to improve the living standards of

the people

- Social functions: A local community development campaign aiming to improve the environment, establish order, and promote mutual help
- Cultural functions: A spiritual development campaign designed to restructure the nation and enhance self-reliance
- Historical functions: A campaign to create a new history through revitalizing the nation and inauguration of a Great Leap Forward movement

3. Proliferation and Development of Saemaul Undong

Stages in the Development of Saemaul Undong

1970: The Birth of Saemaul Undong

On April 22nd, 1970, President Park Chung-hee proposed Saemaul Undong as a Community Renewal Campaign. Six months later, a book titled "A Guide on Community Renewal" was published and relevant education was conducted targeting the heads of basic administrative units like towns ("eup") and townships ("myeon") throughout the nation. These activities signaled the start of Saemaul Undong.

1971-1973: Laying the Groundwork

Beginning in September 1971, projects aimed at increasing both the rural residents' income and their cognitive development were implemented under the spiritual mottos of diligence, self-help and cooperation. Emphasis was placed on ten pilot projects, such as village road construction, stream regeneration, arable land maintenance, development of community wells, improvement of community laundry facilities, creating compost piles, and planting trees.

Saemaul Undong was given the priority among various state programs

of the 3rd Five-Year Economic Development Plan, which was launched in 1972. While aspiring to achieve the export target of USD $ 10 billion and increase the per-capita GNP to USD $1,000 by 1980, the government placed the utmost emphasis on improving the income levels of the agricultural and fishing communities.

In 1973, Saemaul Undong reached the stage of active promotion based on the spirit of self-help and cooperation. Depending on the level of development, the villages were divided into three categories - basic, self-help and self-reliance. They were given different levels of state support according to the classification. Noteworthy was the implementation of stream regeneration and roadside beautification projects under the supervision of the villages' own residents. In January 1973, the government reinforced the support system by establishing Saemaul Undong dedicated departments at the Agriculture Fisheries, Trade Industry and Education ministries as well as the National Agricultural Cooperatives Federation. Saemaul Undong guidance departments were also established at various levels of local governments. With the participation of all 34,665 villages in the nation, Saemaul Undong became more comprehensive and systematic.

1974-1976: Proliferation Based on Self-help

Policy emphasis regarding Saemaul Undong was placed on income enhancement, education and urban Saemaul Undong. Through execution of relevant projects, the movement secured the basis for its substantial development.

In 1975, which was designated as "Saemaul Undong's Leap Forward Year," deputy county chiefs exclusively dedicated to the movement were appointed at 138 counties nationwide. The action was designed to expand the scope of village renovation projects, make

Figure 2.4 A sample of Saemaul Undong in Sindo Village (1975)

the residents accustomed to the renovative activities, and provide necessary assistance. In addition, Saemaul Undong councils were formed at 11 provinces and municipal cities as well as 33 lower-level cities. In 1976, 35 cities started to launch urban Saemaul Undong in earnest, drawing the participation of 4,418 workplaces and organizations.

1977-1979: Establishment of Self-reliant Posture

Between 1977 and 1979, endeavors were made to increase the effectiveness of Saemaul Undong by expanding the scope and size of its various projects, which had been normally carried out within the boundaries of villages. Efforts were exerted to promote multi-regional projects by connecting cities and rural areas, thereby helping to ensure the integration of urban and rural sectors. In the rural areas, the focus of Saemaul Undong was placed on increasing the residents' income and expanding cultural and welfare facilities. In contrast, urban Saemaul Undong projects were mostly aimed at saving resources, improving productivity and promoting sound labor relations.

Korea's per-capita GDP nearly doubled from USD $ 765 in 1976 to USD $ 1,394 in 1979. In the late 1970s, Saemaul Undong projects gradually expanded in size, thereby securing economies of scale. They also featured the construction of joint facilities, widening the scope of use and increasing the rate of usage. The nation exceeded the USD $ 10 billion export mark in 1977, earlier than originally planned, thanks to the successful implementation of Five-Year Economic Development Plans as well as Saemaul Undong.

1980-1989: Private Sector in Leading Role (Restructuring Stage)

The government led Saemaul Undong in the 1970s, but the private sector began to play a leading role in implementing the movement in the 1980s. Against this backdrop, the Saemaul Undong Headquarters was founded as a non-profit organization in December 1980. The government enacted the Saemaul Undong Organization Promotion Act aimed at supporting Saemaul Undong organizations formed through voluntary will of the people. In 1989, the name of the Saemaul Undong Headquarters was changed to the

National Council of Saemaul Undong Movement in Korea. The organization was expanded to have six member associations under its control. It was further expanded later to see the creation of such affiliated associations as the Saemaul Youth Association and the Saemaul Sports Association. The movement also spread to schools of all levels.

Saemaul Undong steadily implemented various projects such as paving village roads, complex farming, crop improvement, logistics network improvement, promotion of a community banking system, and nationwide park programs. In 1988, it launched a large-scale Olympic campaign, contributing greatly to the successful staging of the Seoul Olympics. The per-capita GNP rose from USD $ 1,394 in 1979 to USD $ 4,934 in 1989. The nation's export surpassed the USD $ 20 billion mark in 1982, reaching USD $ 50 billion in 1988.

1990-1999: Leaping Forward·Promotion of Substantial Growth (Expansion of Autonomy)

In the 1990s, Saemaul Undong focused on coping effectively with international liberalization trends and domestic localization moves, thereby contributing to the improvement of the nation's competitiveness. In the 1990s, Saemaul Undong put substantial effort into reforming the people's cogitative abilities and promoting a sound social atmosphere. This move was designed to help the nation pull through the 1997 financial crisis that led to policy intervention by the IMF as well as various difficulties related to the nation's joining in the WTO system and the inauguration of local autonomy.

Emphasis was placed on projects aimed at improving hometown environment, inherit and develop traditional culture, revive the economy, expedite direct trade between rural and urban communities, promote a sound work ethos, encourage healthy lifestyles, launch a moral recovery campaign, and expand volunteer activities.

The per-capital GDP, which stood at USD $ 4,934 in 1989, reached the USD $ 10,000 mark in 1996. However, the financial crisis of 1997 caused a serious contraction of the national economy.

2000-2010: Second Leap of Saemaul Undong

In the 2000s, Saemaul Undong reviewed its achievements and problems it faced in the process of implementing various projects, thereby laying the groundwork for starting a new leap forward.

From 2000 to 2004, Second Saemaul Undong was promoted after setting the following goals for the 21st century: localization, internationalization & informatization, and national reunification. Emphasis was placed on the following projects:

- New campaign for community improvement (community revitalization, local culture promotion, community awareness, informatization in daily lives, etc.)
- Private sector's social security network campaign
- Environmental protection campaign (improving living environment, increasing public environmental awareness, recycling resources campaign, etc.)
- Saemaul Undong for unification and internationalization, implementation of 10 major tasks in preparation for the FIFA World Cup in Seoul, etc.

During the 2005-2008 period, Saemaul Undong was implemented under the motto of creating "a new community, a new mindset, and a new nation." Focus was given to promoting innovative lifestyles, revitalizing hometowns, safeguarding the hometown environment, launching a private sector safety campaign, pursuing international cooperation for national reunification, and promoting cultural citizenship.

Between 2009 and 2010, future-oriented directions for Saemaul Undong were presented. In 2009, the National Council of Saemaul Undong Movement in Korea proposed new directions and priority tasks.

- Setting directions for New Saemaul Undong and creating an internal and external consensus
- Proclaiming and implementing Green Saemaul Undong, playing a growing role in ensuring low-carbon green life

- Building the basis for global Saemaul Undong through expanding its international projects

Decade-specific Changes and Features of Saemaul Undong

During the 1970s and 1980s, Saemaul Undong was implemented with active government support, focusing on projects that could not be voluntarily pursued by rural residents. In contrast, the private sector led the movement, implementing what the government found it hard to accomplish on its own.

Specifically, Saemaul Undong during the 1970s and 1980s was aimed at making visible achievements through the development of rural communities. Beginning in the 1990s, however, it dealt with social movements and public awareness to commensurate with the nation's economic growth. For this reason, Saemaul Undong began to assume significantly different aspects in its project contents and implementation methods in the 1990s.

Table 2.1 shows how Saemaul Undong has developed over the past 40 years. The 1970s were a growth and expansion stage, while the 1980s was a

Table 2.1. Decade-specific changes and features of Saemaul Undong

	1970s	1980s	1990s	2000s
Title	Saemaul Undong	Saemaul Undong	Saemaul Undong	New Saemaul Undong
Objectives	Modernization, income enhancement	Modernization, income enhancement	Life quality improvement, creation of a sound social atmosphere	Life quality improvement, first-rate advanced nation
Project implementation method	Visible achievements, oriented competition and cooperation at local communities	Political decision making, center-oriented project implementation	Private sector organization focusing on autonomous and local community-based project implementation	Upgraded to an international organization, autonomous and local community-oriented promotion
Project content	Developing agricultural and fishing communities, improving workplace productivity, addressing long cherished projects of local communities	Extension of the 1970s projects, public awareness reform campaign	Domestic:Public awareness reform Abroad:Saemaul Undong making inroads abroad based on its achievements of the 1970s and 1980s	Domestic: 4 major projects Abroad: Overseas proliferation based on the achievements made in the 1970s and 1980s

Source: Korea Research Institute for Local Administration (2013), KRILA Focus No. 56, Policy Directions for Saemaul Undong as a National Brand

period of temporary downturn. The 1990s were a transition period preparing for qualitative transformation and a second leap forward. The 2000s may be characterized as a stage for internationalization and a new leap forward in terms of quality.

In the 2000s, Saemaul Undong expanded its scope, which had previously focused on village improvement and income enhancement projects. Under the new stance, it tried to implement the tasks that could not be properly taken handled by the government, such as public awareness campaigns, environmental movements, and volunteer activities.

Implementation Organization and Public Participation

Implementation Organization

The Saemaul Undong scope was extended in the 1980s, placing emphasis on integrated projects involving multiple villages or multi-regional projects. These projects were first promoted between villages that had commonly aspired projects. The residents of the villages concerned conducted the projects with a shared sense of community. This scheme later expanded to cover wider areas.

During the 1970s, the guidance and aid necessary for implementing Saemaul projects were provided mainly by the government-affiliated National Council of Saemaul Undong Movement. In the 1980s, the scheme changed toward a public-private cooperation scheme, following the inauguration of the Saemaul Undong Center, an organization led by the private sector. Saemaul Undong in its early stages was focused on improving living conditions and increasing the income of rural residents. In the 1980s, however, the emphasis shifted to building a welfare society.

In the 1980s, Saemaul Undong began to be promoted in urban areas as well. Furthermore, it began to be introduced abroad, being adopted directly or indirectly by developing countries.

Campaign for Public Participation

During the financial crisis of 1997, all Koreans joined in nationwide efforts to revive the economy. Saemaul Undong also contributed to the campaign by leading a campaign to promote savings and discourage conspicuous consumption. The movement also played a pivotal role in establishing a sound consumption culture through various activities such as the operation of marketplaces selling thrifty products, the campaign to oust luxury and excessive consumption, and the campaign to spend holidays in a frugal manner.

In 1998, Saemaul Undong staged a nationwide movement for reviving the national economy, collecting signatures from 6.16 million people. It also played a leading role in launching the Gold Collection Campaign, which drew the participation of tens of thousands of Koreans. About 13.8 tons of gold were collected from the campaign.

- Campaigns to collect foreign coins, Korean 10 Won coins, and recyclable resources like scrap metal and paper
- Operation of flea markets and low price marketplaces as well as the implementation of a social campaign against conspicuous consumption

Table 2.2 Saemaul Undong's campaign on economic recovery in 1997 and 1998

Directions	Achievements
1997 Economic Recovery Campaign	• Economic Recovery Campaign of Saemaul Undong - Contract amount: KRW 5.3 trillion (3.2 million accounts, payment: KRW 874.3 billion) • Reasonable Consumption and Frugality Campaign - Operation of low price markets, campaign against conspicuous consumption, campaign for frugal holidays - Campaign to collect 10 Won coins
1998 Economic Recovery Campaign	• Saemaul Undong for overcoming economic difficulties - Signature collection campaign for economic recovery: 6.16 million people - Gold Collection Campaign: 13.8 tons, 6.1% of the nationwide collection - Hidden Resources Collection Campaign (scrap metal, waste paper, etc.): 1,747,000 tons • Reasonable Consumption and Frugality Campaign - Operation of low price markets, campaign against excessive consumption: 1,837 visits by 221,000 people • Creation of supportive work atmosphere in society

Source: National Council of Saemaul Undong Movement in Korea, Collection of 30-year Data on Saemaul Undong (2000 Edition)

In 1998, consistent campaigns were launched to help the nation pull through the economic difficulties. In particular, a number of projects were

implemented to help financially strapped small and medium-sized companies.

In July 1999, relevant organizations were set up at local administrative units of various levels to build a social security network led by the private sector. The organizations promoted projects to help families affected by disasters or job losses as well as marginalized or underprivileged people.

Table 2.3 Campaigns for economic recovery and a social security network

Directions	Achievements
Economic Recovery and Social Security Network Campaigns in 1999	• Overcoming the economic crisis - Campaign to help small and medium-sized businesses: Financial aid worth KRW 389,645,000 collected from 9,480 people - Active operation of low price markets: 2,563 times, KRW 2.9 billion in revenue • Prosperity campaign for both urban and rural areas • Campaign for cultural workplace communities • Social security network - Declaration of social security network: 1,350 people participated in the declaration held at 63-story building on July 16, 1999 - Formation of pilot organizations: metropolitan cities/provinces (2), cities/counties/districts (70), towns/townships/neighborhoods (688 places) - Association among participating organizations: 140 organizations (Korean Red Cross, Korean Pharmaceutical Association, National Agricultural Cooperatives Foundation, Jogye Order of Korean Buddhism, etc.)

Source: National Council of Saemaul Undong Movement in Korea, Collection of 30-year Data on Saemaul Undong (2000 Edition)

Saemaul Undong Investment by Funding Sources[3]

The total Saemaul Undong investment during the 1971-1980 period amounted to KRW 3,425.1 billion, which broke down to KRW 1,691.2 billion (49.4%) covered by residents and KRW 1,733.9 billion (50.6%) provided in government subsidies. Of the government subsidies, KRW 488.7 billion (14.3%) was from the state, while KRW 463.6 billion (13.5%) came from the local governments. The remaining KRW 781.6 billion (22.8%) represented loans and aid from other organizations. Thus, the actual government spending accounted for just 27.8% of the total investment.

The investment by the residents was broken down to cash (34.1%), labor

3) The 1970-1980 budget for Saemaul Undong is based on 40-years of Saemaul Undong (Collection of Data) issued by the National Council of Saemaul Undong Movement in Korea (2010), and Use of the Saemaul Undong-related Policy Experience in the 1970s published by the Korea Development Institute (2009).

Table 2.4 Saemaul investment by year and source

(Unit: KRW 100 million)

Source / Year	Total	Aid and investment				Spending by residents
		Sub-total	State budget	Local government budget	Loans/other	
Total	34,251	17,339	4,887	4,636	7,816	16,912
1971	122	41	27	14	-	81
1972	313	33	20	13	-	280
1973	984	215	125	90	-	769
1974	1,328	308	121	173	14	1,020
1975	2,959	1,653	666	579	408	1,306
1976	3,226	1,651	484	396	771	1,575
1977	4,665	2,460	599	723	1,138	2,205
1978	6,342	3,384	654	773	1,957	2,958
1979	7,582	4,252	1,258	1,010	1,984	3,330
1980	6,730	3,342	933	865	1,544	3,388

Source: National Council of Saemaul Undong Movement in Korea (2010), 40-years of Saemaul Undong (Collection of Data)

Table 2.5 Saemaul Undong subsidies' breakdown by sector

(Unit: KRW 100 million)

Year	Total amount	Total subsidy	Production infrastructure	Income enhancement	Welfare/ environment	cogitative development	Urban/ factory
1972	41						
1972	36						
1973	171						
1974	308	294	104	81	64	30	15
1975	1,653	1,245	136	917	79	43	70
1976	1,651	881	176	409	230	33	33
1977	1,808	1,322	168	496	387	87	184
1978	2,329	1,427	132	685	480	109	21
1979	2,268	1,658	265	482	726	68	117
1980	2,801	2,048	327	598	896	81	146
1981	3,119	1,869	299	412	896	111	150
Total	15,936	10,743	1,607	4,080	3,758	562	736

Source: Total amount represents the addition of subsidies worth KRW 1,074.3 billion (67.4%) and loans worth KRW 519.3 billion (32.6%)

(51.6%), materials (11.8%), land (2.1%) and other (0.4%). Cash represented about a third of the investment, demonstrating the high level of participation in Saemaul Undong.

Government aid and investment rose by about 100 fold from KRW 4.1 billion in 1971 and KRW 425.2 billion in 1979.

The government's financial assistance consisted of subsidies (67.4%) and

loans (32.6%). The subsidies went to production of infrastructure projects (10.1%), income enhancement projects (25.6%), welfare and environment projects (23.6%), cogitative development projects (3.5%), and urban/factory Saemaul Undong (4.9%).

CHAPTER 3

Transport Infrastructure Expansion Initiated by Saemaul Undong

1. Expansion of Transport Infrastructure through Saemaul Undong

Saemaul Undong was ultimately aimed at raising the living standards of rural communities by boosting agricultural and fishing productivity, increasing household income, and improving cultural and welfare activities. Under this goal, various projects were implemented to reinforce the basis for production.

- Agricultural Infrastructure Project
- Fishing Infrastructure Project
- Village Improvement Project: Targets the primary living sphere
- Cooperation Zone Project: Targets the secondary living sphere located in areas between villages

During its early stages, Saemaul Undong focused on improving living conditions and the environment of villages. However it extended the scope in 1974, placing emphasis on building production infrastructure around the villages. These activities further expanded in terms of type and scale, developing into inter-village cooperation projects.

Figure 3.1 Embankment and link canal projects

Embankment works in Myeongdae Village, Gakbuk Township, Cheongdo County

Link canal construction in Geumcheon Village, Gakbuk Township, Cheongdo County

Construction of Agricultural Roads[4]

Arable Land Restructuring and Drainage Improvement

Modernizing rural communities required efforts to lay the groundwork for improving productivity of agricultural and fisheries sectors. It was particularly necessary to develop arable lands and reliable water sources, restructure farming lands, and improve the water supply system.

Beginning in the early 1970s, government and farmers jointly conducted simple water development projects involving the construction of wells, water collection conduits, link canals, reservoirs and pumping stations. As a result, the nation could lay the foundation for self-sufficiency for the staple grains of rice and barley in the mid-1970s.

Agricultural infrastructure projects focused on the following areas: farming development for overcoming natural disasters, arable land restructuring and drainage improvement, curbing the use of farming land for purposes related to urbanization and industrialization, and expansion of farming land through reclamation and exploration.

4) Agricultural roads refer to roads with a minimum width of 5 meters that connect villages with local highways, villages with neighboring villages, and villages with farm lands. Through Saemaul Undong, they changed from horse or ox-drawn cart roads to "newly built or expanded roads" and were paved.

Construction of Agricultural Roads

The start of Saemaul Undong in the early 1970s led to the awareness of the importance of agricultural roads and consequently their construction and expansion. Roads built or expanded in the farming communities reached 61,797 km in length by 1980. The projects were carried out with KRW 1,242 million provided by the government and KRW 1,241 million spent by the residents.

Until 1976, the agricultural road construction projects were focused on connecting villages or linking villages with national highways or local roads. Beginning in 1977, however, they developed into large-scale cooperation zone projects connecting townships. Beginning in 1970, World Bank loans worth USD $ 2.7 million were invested in projects to build 850 km of agricultural roads and bridges at 211 locations. These projects contributed considerably to addressing the problems of the old agricultural roads. By the end of 1979, 229 km of agricultural roads were paved nationwide. The installation of bridges and the implementation of road straightening projects also helped improve the functions of agricultural roads to the extent that they provided for the extension of bus lines into the villages.

The construction of such agricultural roads and bridges led to improved functions of road networks in the rural communities. As a result, hand-drawn carts or cultivators replaced A-frames as the primary means of transport

Figure 3.2 Embankment and link canal projects

Agricultural road construction in 2nd Myeongdae Villagei, Gakbuk Township, Cheongdo County

Agricultural road construction in Geumcheon Village, Gakbuk Township, Cheongdo County

in the rural communities, ensuring swift supply and circulation of various agricultural products and related production materials.

Agricultural mechanization reduced the work hours of residents in rural communities. Additionally, they were given increased opportunities for receiving jobs and education outside their villages. These developments helped improve their social status and relief their sense of alienation, eventually contributing to the economic growth of their communities.

Table 3.1 Performance of agricultural road construction (Unit: km)

	Total	Village improvement projects	Agricultural road projects	Other projects
Total	61,797	44,227	14,883	2,687
1971	24,885	17,428	7,427	-
1972	9,177	7,351	1,826	-
1973	8,336	6,505	1,819	12
1974	7,674	7,654	-	20
1975	3,351	1,771	1,540	40
1976	2,578	1,241	1,228	109
1977	1,561	1,096	373	92
1978	2,882	572	-	2,310
1979	787	348	335	104
1980	596	261	335	-

Source: Ministry of Home Affairs, *10-year History of Saemaul Undong*, 1980.

Road Construction Through Community Improvement Projects

Community improvement projects related to the creation of agricultural infrastructure mainly consisted of the following activities: securing community compost grounds and workshops, building community livestock pens and warehouses, improving streams, and widening the bridges and roads within villages.

During the early stages of Saemaul Undong, top priority was placed on widening village roads in order to facilitate production and various other economic activities. Thus, the road expansion programs were implemented as part of community improvement projects. The expansion of roads facilitated the movement of goods, contributing greatly to lowering the agricultural production and distribution costs as well as material purchase prices. It

eventually led to an increase in farming household income and improvement in the moral of the residents.

Construction of Roads Around Villages

In 1970, rural village roads were in such poor condition that they were utilized only by horse-drawn carts. Through Saemaul Undong, such roads were widened and paved to the extent that they could be used by cultivators, threshers and tractors.

- Expansion and paving roads linking villages
- Expansion of roads within villages
- Building bridges over small streams near villages

Bridges were built over streams[5] in mountain villages, thus facilitating the students' commute to school and the transport of agricultural products. Table 3.2 presents the length of community neighborhood roads that were built through community improvement projects between 1971 and 1978. Nationwide, the total length of such roads amounted to 85,851 km, which represents 2,600 meters per village. About half were village entrance roads built to connect the villages to local highways. The remaining half were village roads expanded and repaired through the project.

Table 3.2 Roads length in and around rural villages built through Saemaul Undong (1971-1978)

Road classification	Total length	Length per village
Village entrance roads and agricultural roads	43,631 km	1,322 m
Village roads	42,220 km	1,279 m

Source: Ministry of Home Affairs, *10-year History of Saemaul Undong*, 1980.

Expanding Village Roads

Village road expansion projects were conducted amid the nation's

5) The number of bridges build during 1971-1975 in relation to Saemaul Undong reached 65,000, which represents two bridges per village.

Figure 3.3 Work underway to widen roads within and around villages

Expansion of village entrance roads in Deokam Village, Cheongdo County

Expansion of village roads in 1st Chasan Village, Punggak Township, Cheongdo County

industrialization process. They eventually helped villages develop into the modern communities of today that enjoy more convenient lifestyles. Expansion of the rural roads made it possible to implement mechanized farming. The road widening projects were carried out in about 33,000 villages, which now account for 80-90% of the nation's agricultural production. Expansion and paving of roads in mountain villages made it possible for them to grow cash crops and bring them to market.

Table 3.3 Performance of village road expansion and pavement projects (Unit: km)

Year	Expansion			Pavement		
	Total	Village improvement projects	Other projects	Total	Village improvement projects	Other projects
Total	43,558	43,385	173	2,174	2,083	91
1971	9,624	9,624	-	-	-	-
1972	12,000	12,000	-	250	250	-
1973	10,862	10,862	-	-	-	-
1974	5,361	5,361	-	-	-	-
1975	1,815	1,815	-	285	285	-
1976	1,146	1,146	39	134	134	5
1977	1,453	1,453	2	217	217	2
1978	1,074	1,074	132	222	222	56
1979	171	171	-	637	637	28
1980	52	52	-	429	429	-

Source: Ministry of Home Affairs, 10-year History of Saemaul Undong, 1980.

Opening of Inter-village Roads Through Implementation of Cooperation Zone Projects[6]

To effective select Cooperation Zone Projects, the Saemaul Undong Cooperation Zone Project Promotion Committee set a "one project per zone" principle. Priority was given to projects long desired goals by participating communities. Small-scale inter-village projects were implemented as community improvement projects.

With regard to the creation of production infrastructure, the utmost importance was given to the construction and maintenance of agricultural roads within and between villages as well as the installation of bridges. Implementation of these projects helped facilitate the movement of labor, production materials, and agricultural and livestock products between villages.

Construction of Inter-village Roads and Bridges

The expansion and maintenance of agricultural roads was closely related to the mechanization of agriculture. It was vitally necessary to expand agricultural roads in order to promote mechanized farming along with arable land restructuring. Thus, the highest priority in implementing Cooperation Zone Projects was given to the opening of agricultural roads.

In 1976, 64.7 km of agricultural roads were constructed through 37 Cooperation Zone Projects. In 1977, 390 projects were implemented, resulting in the construction of 69.1 km of agricultural roads. In 1978, the 33 projects stretched over 47.9 km of completed road sections. In 1979, 5.1 km of roads were also paved through 22 projects.

Before the implementation of Saemaul Undong, there had been few economic exchanges between villages. However, the construction of rural

6) Cooperation Zone Projects refer to projects jointly implemented by the residents of different villages to improve inter-village living conditions, production infrastructure and promote the production of specialized crops.

Figure 3.4 Inter-village road expansion and bridge construction projects[7]

Road expansion in Hwa Village, Gaknam Township, Cheongdo County

Bridge construction in Hyeon Village, Punggak Township, Cheongdo County

roads and bridges made it easier to move from one village to another thereby facilitating the transport and common shipping of agricultural and livestock products.

A total of 2,117 bridges were built in 1977 through 71 cooperation zone projects in 1977. In 1979, 41 projects were implemented, leading to the completion of 2,577 bridges. Such an active construction of bridges had significant impacts on the modernization of rural communities.

Table 3.4 Bridge installation projects

Year	Projects					
	Total locations	Community improvement projects	Special support projects for model communities	Cooperation zone projects	Community infrastructure projects	Community maintenance projects
Total	79,516	76,327	889	112	294	1,894
1971	9,430	9,430	-	-	-	-
1972	12,800	12,800	-	-	-	-
1973	9,963	9,963	1	-	-	-
1974	9,662	9,662	-	-	-	76
1975	10,550	10,550	164	-	-	52
1976	6,918	6,918	91	-	-	21
1977	7,052	7,052	453	71	-	16
1978	5,549	6,173	82	-	294	-
1979	4,271	4,019	98	41	-	113
1980	3,321	3,208	-	-	-	113

Source: Ministry of Home Affairs, *10-year History of Saemaul Undong*, 1980.

2. Five-Year Economic Development Plans and Transport Infrastructure[8]

Road Sector

During the First Five-Year Economic Development Plan period (1962-1966), the government spent KRW 14 billion in its road budget to build 431 bridges and 73.7 km of industrial roads for mining exploration on Mt. Taebaek and Mt. Jiri. In addition, the Ministry of Defense paved 488 km of roads, with assistance from the U.S. Eighth Army.

While implementing the Second Five-Year Economic Development Plan (1967-1971), the government enacted the Road Improvement Acceleration Act and the Road Maintenance Special Account Act. With the funneling of gasoline and car tax revenues to the road sector, the road investment budget rose significantly from the initial KRW 30 billion to KRW 68.7 billion.

During the Third Five-Year Economic Development Plan period (1971-1976), the opening of Gyeongbu Expressway turned the nation into a one-day living sphere, sharply increasing the road sector's share in the transport market. The pavement ratio of national highways jumped from 23.7% to 70.2%, and the construction of Honam, Namhae and Yeongdong Expressways began to be promoted. IBRD loans were used to build 571 km of expressways, expand 300 km of national highways, and pave 2,968 km of national highways, thereby contributing remarkably to the nation's economic development.

The Fourth Five-Year Economic Development Plan period (1977-1981) saw the execution of four-lane expansion projects covering the Daegu - Masan and Busan - Masan Expressways as well as arterial highways. During

7) Cheongdo County (2013), A Collection of Photos on Saemaul Undong's Birthplace, Cheongdo, Photos provided by Saemaul Association of Daegu.

8) Ministry of Land, Transport and Maritime Affairs and the Korea Transport Institute (2012), 2011 Project to Develop Economic Development Experience Modules: Institutional systems for building transport infrastructure facilities and the related funding sources.

Figure 3.5 Before and after the opening of Gyeongbu Expressway

1946

1968

After opening of the Seoul - Daejeon section of the Gyeongbu Expressway in 1969

Present network of expressways

this period, the ratio of paved national highways climbed from 45.5% to 66.4% in 1981.

During the Fifth Five-Year Economic and Social Development Plan period[9] (1982-1986), Korea implemented the fourth IBRD project, completing the construction of 47 road sections with a combined length of 1,233 km in 1983, and the fifth ADB project, widening and paving 380 km of roads in 1986. As a result, the pavement ratio of national highways reached 77.1% in 1986. Changes in the road length and the pavement ratio are presented in Table 3.5.

Road expansion projects continued through the Sixth Five-Year Economic and Social Development Plan period (1987-1991), covered the Yeongdong

9) The economic development plans were implemented four times between 1961 and 1981. In 1982, the name was changed to the Economic and Social Development Plan, which was implemented in the 5th Plan (1982-1986), the 6th Plan (1987-1991), and the 7th Plan (1992~1996). (Source: Doosan Encyclopedia).

Expressway and the Singal - Ansan, Pangyo - Guri and Yangjae - Cheongwon sections on other expressways. The national highway pavement ratio rose to 92% in 1991, and the Road Project Special Account Act was enacted in 1988.

During the Seventh Five-Year Economic and Social Development Plan period (1992-1996), the government established the Third Comprehensive National Land Development Plan (1992-2001), which included a project to build 7×9 grid-like trunk road network with a total length of 6,000 km. Another important development was the merger of the Road Project Special Account into the Transportation Facility Special Account, which made it possible to ensure a stable supply of funding resources for transport facility projects.

The government established the Road Maintenance Framework Plan in December 1998, setting 2020 as the target year for the realization of an Approach Distance Equalization Project designed to expeditiously promote a balanced development of national land spaces. The plan was revised in December 2005 and again in June 2011.

Table 3.5 Changes in road lengths during the economic development plan periods

(Unit: km, %)

Year	Expressway	National highway	Local highway	Metropolitan/ provincial road	City/county road	Total	Pavement ratio
1961	-	5,743	10,542	-	10,884	27,169	4.1
1966	-	8,186	10,385	1,862	13,003	33,476	5.8
1971	655	8,146	10,760	5,661	15,413	40,635	14.2
1976	1,142	8,232	10,854	7,291	17,995	45,514	24.0
1981	1,245	12,247	11,013	9,043	17,428	50,336	34.1
1986	1,415	12,258	10,313	10,724	18,942	53,654	54.2
1991	1,597	12,114	10,643	12,717	21,016	58,088	76.4
1996	1,886	12,464	17,147	14,857	35,989	82,342	72.7
1999	2,040	12,418	17,145	17,892	38,039	87,534	74.7
2006	3,103	14,224	17,677	17,738	49,319	102,061	76.8
2009	3,776	13,819	18,138	18,749	50,501	104,983	79.2

Source: Ministry of Land, Infrastructure and Transport, *Road Policy Manual*, 2011.

Rail Sector

During the First Economic Development Plan period (1962-1966), the nation's railroad sector made a significant leap forward, as priority in infrastructure investment was given to building east-west rail connections and expanding industrial railroad networks. The railroad lines that opened during this period included Gyeongui Line (Neunggok - Uijeongbu, 31.9 km, 1963), Donghae Bukbu Line (Bukpyeong - Gyeongpodae, 50.3 km, 1962), Gyeongbuk Line (Gimcheon - Jeomchon, 58.6 km, 1966), Gyeongjeon Line (Samnangjin - Songjeongni, 80.5 km, 1968), and Gyeongin Double Track Line (Juan - Yeongdeungpo, 23.3 km, 1965).

While the second and third economic development plans were underway between 1967 and 1976, the nation saw the implementation of an IBRD survey as well as numerous railway construction, improvement and electrification projects. During this period, double tracks were installed on Yeongdong, Mungyeong, Yeocheon and Chungbuk Lines, and electrification projects were carried out for Jungang and Taebaek Lines.

The rail sector maintained a fairly high share in the transport market until the mid-1960s. Beginning in the 1970s, however, it gradually lost its competitiveness and its roles shrank due to the development of the road sector characterized by the construction of expressways.

In the 1970s, the expansion of the Seoul metropolitan area caused an increase in demand for construction materials. This in turn led to the electrification of industrial railways in the capital region and the Mt. Taebaek area. The ratio of double tracked railways rose from 15.1% in 1961 to 24.5% in 1985. However, the operational length of railways showed a low growth rate, increasing from 3,032 km in 1962 to 3,091 km in 1990.

Traffic congestion emerged as a national problem to be addressed with in the 1980s amid continued growth in population and commodity circulation in the urban areas. As a way to ease the congestion problem, the Seoul metropolitan area subway network began to be expanded in a full-fledged manner.

Figure 3.6 Changes in the Seoul - Busan railway

1899

1972

Present KTX

Railroad Master Plan

In the 1990s, the nation was ushered into a new era of railway transport with the introduction of a high-speed railroad system. The first-stage section of the Gyeongbu High Speed Railway opened in 2004, 12 years after its construction started, linking Seoul and Daegu. Presently, other high-speed rail projects are underway, aiming to complete the Honam High Speed Line by 2017 and the Suseo High Speed Line by 2014.

Figure 3.7 Changes in metropolitan railways

1960s | 1985

Present | Route map of the Seoul Metropolitan Subway

Table 3.6 Changes in railroad and subway lengths

(Unit: km)

Categories	Railroad	Subway	Total	Descriptions
1948	2,753	-	2,753	
1950	2,776	-	2,776	
1960	2,976	-	2,976	
1970	3,193	-	3,193	
1975	3,144	8	3,152	
1980	3,135	22	3,157	
1990	3,091	150	3,241	
2000	3,123	362	3,485	
2008	3,381	489	3,870	

1974 Aug. First subway opening in Seoul
1985 July Urban railway opening in Busan
1995 Nov. Seoul Metropolitan Rapid Transit Corp.
1997 Nov. Urban railway opening in Daegu
1999 Oct. Urban railway opening in Incheon
2004 April Urban railway opening in Gwangju
2006 March Urban railway opening in Daejeon

Source: Korean National Railroad, Railroad Statistical Annals and other data on urban railroad operation

Increased Investment in Road and Rail Infrastructure

Aware of the importance of transport and logistics in economic development, Korea exerted great effort to expand investment in roads and railways since the late 1960s. The rail and road sectors were given particular importance in promoting transport infrastructure under economic development plans that began to be implemented in the 1960s. In the 1990s, the government established a special account for transportation, which represents its endeavors to ensure a stable supply of funds related to transport infrastructure.

Before 2000

The Korean economy began to achieve rapid growth with the implementation of economic development plans beginning in 1962. The transport sector played an important role in pursuing the nation's economic growth strategy.

Investment in the road sector began to be made in earnest in the late 1960s. The road-sector investments, which amounted to KRW 6.1 billion in the First Economic Development Plan period, rose to KRW 114.7 billion in the Second Plan period, accounting for over 1% of the nation's GDP. From then on, road sector investments continued to increase, reaching over KRW 10 trillion during the Sixth Economic and Social Development Plan period.

Investment in the rail sector also continued to increase from the late 1960s onwards. However, the sector was outperformed by the road sector in terms of the rate of investment growth. More investments began to be made in the road sector than in the rail industry in the Second Economic Development Period. However, rail-sector investments jumped sharply during the Seventh Economic and Social Development Plan period (1992-1996) to the extent that they accounted for 0.45% of the GNP.

Investments in road infrastructure rose significantly in the late 1980s. In contrast, investments in other transport facilities decreased to the extent that they fell behind 2% of GDP. From 1997 on, facility investments increased for all major transport sectors – roads, railroads, subways, airports and ports.

The road and rail sector investments amounted to 2.64% in terms of GDP.

Table 3.7 Investment in transport facilities as percentages of GDP

Economic Development Plans	GDP	Transport facilities					Total
		Road	Railroad	Subway	Airport	Port	
1st (1962-1966)	33,753	61 (0.18)	215 (0.64)	-	26 (0.07)	52 (0.16)	355 (1.05)
2nd (1967-1971)	106,901	1,147 (1.07)	634 (0.59)	83 (0.08)	76 (0.07)	267 (0.25)	2,207 (2.06)
3rd (1972-1976)	413,723	4,674 (1.13)	2,669 (0.65)	248 (0.06)	189 (0.05)	1,284 (0.31)	9,064 (2.19)
4th (1977-1981)	1,583,855	16,302 (1.03)	7,434 (0.47)	5,532 (0.35)	1,469 (0.09)	3,451 (0.22)	34,188 (2.16)Đ
5th (1982-1986)	3,674,664	37,191 (1.01)	9,647 (0.26)	24,379 (0.66)	2,223 (0.06)	6,186 (0.17)	79,626 (2.17)
6th (1987-1991)	7,868,142	115,225 (1.46)	14,620 (0.19)	789 (0.01)	2,538 (0.03)	11,538 (0.15)	144,710 (1.84)
7th (1992-1996)	16,424,035	189,693 (1.15)	73,162 (0.45)	30,523 (0.19)	13,944 (0.08)	20,655 (0.13)	327,977 (2.00)
1997-2000	24,368,166	526,973 (2.16)	117,890 (0.48)	86,276 (0.35)	36,161 (0.15)	48,373 (0.20)	815,643 (3.35)

Note: Investment in the rail sector includes the investment in the high-speed railway system and the metropolitan transport budget (from 1998)

Source: Ministry of Land, Infrastructure and Transport, the Korea Transport Institute (2012), 2011 Project to Develop Economic Development Experience Modules: Institutional systems for building transport infrastructure facilities and the related funding sources

From 2000 Onwards

The share of transport sector in terms of GDP dropped a bit in the 2000s, compared to previous years, due to an expansion of the nation's economic size. However, the road and rail sector budgets steadily showed an upward trend till the late 2000s. The size of the special account for transportation increased remarkably from KRW 13.9 trillion in 2008 to KRW 17.1 trillion in 2009.

The road budget steadily rose from KRW 7.5 trillion in 2000, to KRW 8.1 trillion in 2002, and to KRW 8.4 trillion in 2003. However, it showed a slightly downward trend between 2004 and 2007. As of 2010, the road sector budget amounted to KRW 7.7 billion, which represented 52.1% of the total transport budget.

The budget for the rail sector also kept increasing from KRW 2.7 trillion in 2000 to KRW 3.2 trillion in 2002, and to KRW 3.5 trillion in 2003. It showed a slightly decreasing trend between 2004 and 2007. Unlike in the

road sector, investments in the rail sector have been increasing since 2008 because of the need to respond to climate change as well as the state policy of pursuing low-carbon green growth. In 2010, the rail sector accounted for 24.1% of the entire investments in the transport sector (32.9% when the subway sector is included).

Table 3.8 Trends in transportation facility investments since 2000

Categories		2002	2003	2004	2005	2006	2007	2008	2009	2010
Size of the special account for transport facilities		132,558	143,703	135,529	130,587	125,953	129,027	139,424	170,780	146,999
Subaccount for roads	Share (%)	80,976 61.1%	84,363 58.7%	78,950 58.3%	69,164 53.0%	64,828 51.5%	66,641 51.6%	73,354 52.6%	90,684 53.1%	76,630 52.1%
	Transport tax	50,118	56,237	60,221	51,589	48,979	47,877	42,800	48,379	49,111
Subaccount for railroads	Share (%)	32,962 24.9%	35,870 25.0%	31,744 23.4%	21,537 16.5%	20,276 16.1%	20,459 15.9%	23,946 17.2%	33,303 19.5%	35,395 24.1%
	Transport tax	18,364	20,091	21,514	17,837	13,358	13,141	11,889	14,920	22,239
Subaccount for urban railways	Share (%)	8,474 6.4%	7,399 5.1%	8,966 6.6%	13,312 10.2%	13,874 11.0%	13,487 10.5%	14,665 10.5%	17,416 10.2%	12,925 8.8%
	Transport tax	Included in the railroad subaccount (budget separation beginning in 2005)			12,655	8,015	8,983	7,926	9,043	9,266

Source: Ministry of Land, Infrastructure and Transport, *Major SOC Statistics*, 2011.

3. Comprehensive National Territorial Development Plan and Transport Infrastructure

A series of Five-Year Economic Development Plans implemented since 1962 and Comprehensive National Development programs played an important role in securing the basis for economic growth through the expansion of social overhead capital.

National Development Plans are closely related to economic development policies. Their relations so far can be summarized as follows:

- From the 1960s through the 1970s, the development of state land spaces was promoted as a supplementary means of assistance in accelerating economic growth and exports. Consequently, land development programs were basically focused on developing physical infrastructure

such as roads and industrial complexes.

- In the 1980s, the government pursued national development policies designed to address social problems like population concentration and traffic congestion in urban areas and to ensure a balanced development of the nation by removing gaps between regions.
- In the 1990s, priority was given to improving the competitiveness of land spaces in preparation for globalization and localization.
- In the 2000s, the utmost emphasis is placed on reinforcing the innovative capacity and improving global competitiveness of the regions.

National Development in the 1960s

The need for systematic development of national land spaces arose as the nation was implementing various projects for industrialization. To meet the need, the government enacted the Comprehensive National Land Development Act in October 1963. Four years later, it drafted a plan for Grand National Land Construction, the first of its kind in the nation's history. The draft plan set a 10-year target period starting in 1967. For the Second Five-Year Economic Development Plan period (1967-1971), it envisaged implementing the following projects: construction of 1 million houses, development of areas along the four major rivers, development of ten ports along the eastern, western and southern coats, construction of four expressways, and construction of railway networks along the nation's coastal areas.

In 1968, the government developed a long-term framework plan for National Land Development, setting 1986 as the target year. Most of the programs proposed in the plan were included in the First Comprehensive National Territorial Development Plan (1972-1981).

National Development in the 1970s

The 1970s saw active implementation of National Development Projects. The

First Comprehensive National Territorial Development Plan (1972-1981) began to be implemented upon its formulation in 1972, being followed by the introduction of various relevant systems and policies.

The First Comprehensive National Territorial Development Plan encompassed all the major land use and infrastructure development strategies which had been promoted since the 1960s. It was particularly based on the awareness of shortages of social overhead capital like transport, electricity and communications facilities.

- Effective land use for expeditious growth of the economy
- Laying the basis for developing land spaces to support economic growth
- Developing state resources and preserving the environment in the course of developing large-scale industrial complexes
- Solving urban problems and improving the living environment to ensure an enhanced lifestyle

In the 1970s, the government prepared various laws and institutions to implement the policy measures suggested in the First Comprehensive National Territorial Development Plan. Particularly noteworthy was the designation of green belt areas in and around major cities, including Seoul, from 1971 through 1977 in an effort to prevent disorderly expansion of urban areas.

Development programs in the 1970s focused on resolving the urgent problem of housing shortages as well as expanding infrastructure such as power facilities and roads. Consequently, housing, electricity, road and communications sectors accounted for 70% of the entire investments for national development. In contrast, relatively low levels of investment were made into flood control projects, pollution prevention programs, and water supply and sewage systems.

National Development in the 1980s

For the Second Comprehensive National Territorial Development Plan (1982-1991), the government set the following goals: inducing settlements in the

provinces, exploring nationwide development prospects, raising the level of welfare for the people, and safeguarding the natural environment.

The Second Comprehensive National Territorial Development Plan featured the idea of promoting regional living spheres as well as a hub-based growth scheme. It also involved the enactment of the Seoul Metropolitan Area Improvement Planning Act designed to induce a balanced development of the nation. The government established Maintenance of the Capital Area Framework Plan (1984-1996) in 1984 and came up with the revised Second Comprehensive National Territorial Development Plan (1987-1991) in the late 1980s.

During the Second Comprehensive National Territorial Development Plan period, the largest portion of the relevant investments, or 38.5%, was made in the housing construction sector. It was followed by energy, communications, road and urban development sectors.

The nation's hosting of the 1986 Asian Games and the 1988 Olympic Games led to the concentration of national development investments in the Seoul metropolitan area. This kept the government from making progress in reducing the gap between the capital region and the surrounding province. The situation prompted the government to introduce the concept of public ownership of land, making endeavors to curb speculative investment in real estate.

National Development in the 1990s

The 1985 enactment of the Local Autonomy Act opened the era of localization. Consequently, the method of pursuing national development shifted from top-down to a bottom-up approach, increasing awareness of the importance of regional participation and roles in implementing national development policies and projects.

With the expansion in the nation's economic size and improvement in the levels of personal income, there arose issues of infrastructure shortages in the communications, transport, information and environment sectors. To address this problem, the national development policy in the 1990s focused on strengthening the competitiveness of land spaces while accelerating a

balanced development of the nation.

The national development policy during the 1990s was based on the Third Comprehensive National Territorial Development Plan (1992-2000), pursing the goals of formulating a development framework oriented toward the provinces, establishing a productive and resource-saving land use system, increasing public welfare, safeguarding the environment, and laying the basis for national reunification.

The Third Comprehensive National Territorial Development Plan was designed to ensure a balanced national development. Specifically, the government sought to curb the excessive expansion of the capital region through development of specialized functions of hub cities in the provinces. However, various policy measures aimed at ensuring a balanced development between regions did not prevent the continued concentration of resources in the capital area. The capital region covers just 11.8% of the nation's land area. Yet as of 2000, it accounted for 46.3% of the nation's population, 84% of state organizations, and 91% of headquarters of the nation's 100 largest companies.

National Development in the 2000s

There national development plans were formulated in the 2000s. In the Fourth Comprehensive National Territorial Development Plan (2000-2020), the government presented a long-term national development strategy for the beginning of the 21st century. It set the "realization of a unified nation" as the basic ideal and goal for national development in 2020.

The government devised the Modified Fourth Comprehensive National Territorial Development Plan (2006-2020) as it was constructing Sejong City as a multi-functional administrative city and relocating state agencies to the province as part of its efforts to rearrange the core state functions and promote innovation-oriented regional development.

The implementation strategies were focused on the following objectives: building a foundation for self-reliant regional development, managing land

spaces for the Northeast Asian era and laying the groundwork for realizing unification, constructing network-type infrastructure, establishing a beautiful and people-friendly environment for settlements, ensuring sustainable management of land and resources, and devising decentralized land plans and implementation systems.

Table 3.9 Changes in national development plans and strategies

Classification	Basic goals	Development strategies and policies
1st Comprehensive National Territorial Development Plan (1972-1981)	• Effective management of land use • Expansion of the base for land development • Land resources development and natural preservation • Improving the public's living environment	• Building large-scale industrial foundations • Improving transport, communications, water and energy supply networks • Reinforcing regional functions
2nd Comprehensive National Territorial Development Plan (1982-1991)	• Inducing provincial settlements of population • Nationwide expansion of the scope of development • Enhancing the public's welfare level • Preserving the land and natural environment	• Forming a multi-nuclear structure and developing regional living spheres • Curbing and managing the growth of Seoul and Busan • Expanding social overhead capital • Accelerating the development of less advanced areas
3rd Comprehensive National Territorial Development Plan (1992-2001)	• Formulating a framework for decentralized national development • Building a productive/resources-saving land use system • Improving public welfare and preserving the environment • Laying the basis for inter-Korean unification	• Promoting the development of provinces and curbing the concentration of resources in the capital region • Developing complexes for new industries and promoting advancement of industrial structure • Building a high-speed integrated network of exchanges • Increasing investment in sectors related to people's daily lives and the environment • Management of inter-Korean exchange areas
4th Comprehensive National Territorial Development Plan (2000-2020)	• Keynote - Realization of a unified land in the 21st century • Objectives - Balanced development - Green development - Open system of development - Development for unification	• Creating open-style national areas for unification • Advancing the competitiveness of regions • Creating a healthy and pleasant national environment • Building a high-speed transport/information network • Developing a basis for inter-Korean exchanges and cooperation
Modified 4th Comprehensive National Territorial Development Plan (2006-2020)	• Keynote - Dynamic land of unification • Objectives - Balanced development for mutual benefits - Competitive open system of development - Welfare-oriented development - Sustainable green development - Development for unification and prosperity	• Building a self-reliant regional development structure • Creating a basis for national management in the Northeast Asian era and for furthering unification • Building network-style infrastructure • Promoting a suitable environment for settlement • Ensuring sustainable land and resource management • Building a decentralized national development system

Source: Based on extracts from 60-year History of Korean Economy (2010), The Committee on the Sixty-year History of the Korean Economy

CHAPTER 4

Status of Transport Infrastructure and Relevant Organization

1. Status of Transport Infrastructure[10]

Road Infrastructure

The Gyeongbu Expressway opened in 1970 to be followed by the construction of Honam, Namhae, Yeongdong and Jungbu Naeryuk Expressways over the next decade. In 1979, the length of the nation's expressways reached 1,325 km.

During the 7th Economic and Social Development period (1992-1996), the government established a plan to build a 7×9 grid-type network of the nation's main arterial roads. Six high-speed ring roads were built in metropolitan areas, establishing a radiant circular road network system that can help disperse through traffic between regions. The nation entered a golden age of road construction in the 1990s, when 1,853 km of expressways was built on 19 routes.

Road networks[11] consist of national and local highways that connect

10) Ministry of Land, Infrastructure and Transport, Hyundai Research Institute (2013), based on extracts from the road, railway, aviation and port sections of Korea's Infrastructure Development and Economic Growth: Infrastructure Development Training Program.

11) According to the Road Act, roads are classified into seven categories: expressways, national highways, local highways, special/metropolitan city roads, provincial roads, city roads, and county roads.

Figure 4.1 Gyeongbu Expressway shortly after its opening in 1970 and the present Gyeongbu Expressway

major cities throughout the nation as well as provincial, city and county roads that link various communities within provincial areas. The length of the nation's roads increased about twofold from 56,715 km in 1990 to 105,565 km in 2010.

Table 4.1 Increases in road length by road type from 1990 to 2010 (Unit: km, pavement ratio (%))

Road types	1990	1995	2000	2005	2010
Expressways	1,551	1,825	2,131	2,968	3,859
	(100)	(100)	(100)	(100)	(100)
National highways	12,161	12,053	12,413	14,224	13,812
	(89.1)	(99.5)	(98.2)	(97.3)	(98.0)
Local highways	10,672	13,854	17,151	17,710	18,180
	(63.6)	(72.2)	(78.3)	(79.0)	(82.0)
Special city/metropolitan city/ provincial roads	12,298	14,082	17,839	17,506	18,878
	(83.0)	(90.6)	(88.7)	(99.4)	(99.0)
City/county roads	20,033	32,424	39,240	49,885	50,835
	(55.7)	(61.6)	(60.4)	(60.9)	(65.0)
Total	56,715	74,237	88,775	102,293	105,565
	(71.5)	(76.0)	(75.8)	(76.8)	(80.0)

Source: Statistics Korea, http://kosis.kr

Railroad Infrastructure

Currently, the nation's railroad networks measure 4,207.6 km in length. That consists of 368.5 km of high-speed railways, 3,241.5 km of general railways, and 695.9 km of metropolitan and urban railways. With exception

for the general railways, other railroad lines have all been double tracked and electrified thus securing the basis for providing high-quality services.

Table 4.2 Status of railroad lengths (As of December 2011)

Classification	Total	Railroad				Urban railway
		Subtotal	High-speed	General	Metropolitan (dedicated sections)	
Total length (km)	4,207.6	3,635.4	368.5	3,241.5	123.7 (25.4)	572.2
Double tracking ratio (%)	59.7	52.7	100	46.9	100	100
Electrification ratio (%)	71.6	66.7	100	62.6	100	100

Note: The length of metropolitan railways is calculated by adding the lengths of its pure sections that do not overlap with general railway sections
Source: Ministry of Land, Transport and Maritime Affairs, Hyundai Research Institute (2013), Korea's Infrastructure Development and Economic Growth: Infrastructure Development Training Program

The rail sector transports 3.5 billion passengers a year, including 50 million riding high-speed trains and 2.35 billion using urban railways. It also annually carries over 40 million tons of freight. Railways, including subways, have a high market share of 39.8% (based on person/km) in the nation's transport sector.

Table 4.3 Transport market shares by mode (As of 2010)

Classification	Total	Railway	Subway	Roadway	Marine transport	Aviation
1,000 people	13,014,944	1,060,926	2,273,086	9,646,404	14,312	20,216
Share (%)	100	8.2	17.5	74.1	0.1	0.2
1 million people-km	146,715	33,012	25,369	79,440	883	8,011
Share (%)	100	22.5	17.3	54.1	0.6	5.5

Source: 2011 Yearbook on Territorial and Maritime Statistics

State investment in the rail sector increased by about threefold during the 15-year period from 1996 to 2011, resulting in steady expansion of the rail networks. The length of high-speed railways rose significantly with the opening of the Gyeongbu High Speed Railway in 2004, reaching 368.5 km in 2011.

Table 4.4 Rail lengths, double tracking and electrification ratios by year

Classification		1980	1990	2000	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Rail length (km)	Total	3,178.8	3,235,4	3,511.0	3,539.7	3,550.7	3,796.5	3,861.7	3,874.1	3,899.4	3,885.1	3,911.9	4,094.3	4,207.6
	High-speed	-	-	-	-	-	238.6	240.4	240.4	240.4	240.4	240.4	368.5	368.5
	General	3,134.6	3,091.3	3,123.0	3,129.3	3,140.3	3,135.5	3,151.6	3,151.6	3,156.9	3,139.0	3,137.5	3,187.0	3,241.5
	Metropolitan (pure)							18.0 (0)	39.8 (0)	41.6 (1.8)	41.6 (1.8)	82.2 (1.8)	100.1 (1.8)	123.7 (25.4)
	Urban	22.1	144.1	388.0	410.4	410.4	422.4	469.7	482.1	500.3	503.9	534.0	537.0	572.2
Double tracking ratio (%)	Total	23.3	30.6	39.6	40.0	40.4	45.8	47.3	47.6	48.8	49.8	51.7	56.2	59.7
	High-speed	-	-	-	-	-	100	100	100	100	100	100	100	100
	General	22.9	27.4	32.1	31.9	32.5	34.3	35.4	36.0	36.8	38.0	39.7	43.7	46.9
	Metropolitan							100	100	100	100	100	100	100
	Urban	100	100	100	100	100	100	100	100	100	100	100	100	100
Electrification ratio (%)	Total	12.3	20.6	30.1	30.4	30.7	52.9	55.4	59.4	59.4	60.2	62.1	65.5	71.6
	High-speed	-	-	-	-	-	100	100	100	100	100	100	100	100
	General	11.8	16.9	21.4	21.4	21.7	43.0	45.2	50.1	49.9	50.7	52.7	55.8	62.6
	Metropolitan							100	100	100	100	100	100	100
	Urban	100	100	100	100	100	100	100	100	100	100	100	100	100

Note: The length of metropolitan railways is calculated by adding the lengths of its dedicated sections that do not overlap with general railway sections
Source: Ministry of Land, Infrastructure and Transport, Hyundai Research Institute (2013), Korea's Infrastructure Development and Economic Growth – Infrastructure Development Training Program

Airport Infrastructure

Gimpo Airport opened in 1939 with Gimhae and Jeju Airports beginning operation seven years later. In 1949, Gwangju and Gangneung Airports started providing commercial airline services by utilizing military airfields. Commercial airline services also began to be provided using military airfields in Daegu, Sacheon, Sokcho and Pohang. In the 1970s, new airports were developed in Mokpo, Gunsan, Ulsan and Yeosu.

Following the 1986 Seoul Asian Games and the 1988 Seoul Olympics, Korea liberalized overseas travel for its citizens. It signaled the beginning of rapid growth of the domestic aviation industry. Yecheon Airport opened in 1989, and Cheongju and Wonju Airports began operating in 1997.

From the late 1990s up to 2000, the number of global airline passengers showed an annual increase rate of over 5% in the North American,

European and Asian markets. Amid this development, Korea opened Incheon International Airport in 2001 in preparation for capacity saturation of Gimpo Airport and to nurture a global airport hub. Yangyang and Muan Airports opened in 2002 and 2007, respectively.

Port Infrastructure

Promoting maritime trade through the development of ports is vital for ensuring the growth of Korea, which relies on marine transport for handling 99.7% of its international freight volumes. The marine transport sector has thus been nurtured as one of the nation's core industries. As of August 2012, Korea had 31 trade ports. Of them, 14 were under state supervision while the remaining 17 were under the control of provincial agencies.

Korean began implementing a full-fledged port development policy after the 1st Five-year Economic Development Plan (1962-1966) was launched. The policy placed emphasis on constructing large wharfs needed for unloading large amounts of imported raw materials.

During the 2nd Five-Year Economic Development Plan period (1967-1971), the focus was placed on building ports that would play supportive roles in international trade. During the 3rd Five-Year Economic Development Plan period (1972-1976), the government carried out projects to expand port facilities to meet international standards related to containerization and vessel capacity maximization as well as to modernize loading/unloading equipment. During the 4th Five-Year Economic Development Plan period (1977-1981), investment was concentrated on constructing large wharfs to cope with increases in export/import volumes and the ever growing size of vessels. Emphasis was also placed on building container ports and modernizing port facilities. During the 5th Five-Year Economic and Social Development Plan period (1982-1986), foremost priority was given to ensuring continued expansion of major ports, developing new ports, and building large-scale coal wharfs. During the 6th Five-Year Economic and Social Development Plan period (1987-1991)[12], the port development policy was oriented toward

expanding coastal freight wharfs. Such a port development policy was maintained throughout the 7th Five-Year Economic and Social Development Plan period (1992-1996).

Table 4.5 Port investment during the Five-Year Economic Development periods

Investment / Periods	Investment (hundred million KRW)	Pier (m)	Wharf (m)	Loading capacity (thousand tons)	Berthing capacity (vessels)
1st (1962-1966)	52	713	1,201	5,630	4
2nd (1967-1971)	328	5,083	2,295	4,131	14
3rd (1972-1976)	1,134	6,151	3,004	15,219	48
4th (1977-1981)	4,402	10,188	2,624	53,423	70
5th (1982-1986)	8,319	10,722	1,524	63,253	64
6th (1987-1991)	14,282	17,395	15,854	73,677	133
7th (1992-1996)	21,548	15,759	1,553	46,892	99

Source: Ministry of Land, Infrastructure and Transport, Hyundai Research Institute (2012), Port - Infrastructure Development Training Program

2. Government Organizations Related to Transport Infrastructure[13]

Upon inauguration of the first Republic of Korea government on August 15th, 1948, the Ministry of Transportation was established, taking responsibility for affairs related to roadways, railways, aviation and marine transport. In February 1955, the Ministry of Reconstruction (with two bureaus and nine departments) was created to handle construction-related administrative affairs.

12) The largest amount of investment in port facilities was made during the 6th Five-Year Economic and Social Development Plan period (1987-1991).

13) The Transport Ministry was established with the inauguration of the first Republic of Korea government in 1948. It was later reorganized into the Construction and Transport Ministry, which became the Ministry of Land, Transport and Maritime Affairs through the merger with the Ministry of Maritime Affairs and Fisheries in the 2008 government restructuring. In 2013, it was reorganized again to the Ministry of Land, Infrastructure and Transport. Detailed information on organizational changes and the timeline can be found on the ministry homepage (www.molit.go.kr).

In June 1961, the Ministry of Reconstruction was reorganized into the Ministry of Construction, which became the National Construction Service in another restructuring of government organizations the next month. On June 18th, 1962, the service was replaced by the Ministry of Construction, which was revived to effectively implement national development projects. The government also created the Economic Planning Board through the merger of the Construction Ministry's Planning Section, the Justice Ministry's Budget Bureau and the Home Ministry's Statistics Bureau. In September 1963, the Korea Railroad Administration was founded as an organization under administrative control of the Ministry of Transportation.

In December 1994, the Ministry of Construction and Transportation was inaugurated through the merger of the Construction and Transportation ministries, thus making it possible to organically connect the national development planning and transport network construction functions. In January, the Ministry of Maritime Affairs and Fisheries was newly established.

In January 2005, the Korea Railroad Administration affiliated with the Ministry of Construction and Transportation was abolished. On March 6th, 2008, the Ministry of Land, Transport and Maritime Affairs was created through the merger of the Construction and Transportation Ministry with the Maritime Affairs and Fisheries Ministry's Maritime Logistics, Port and Marine Environment Affairs and the Ministry of Public Administration and Local Autonomy's Land Registration Department.

In a government restructuring implemented on March 23rd, 2013, following the inauguration of President Park Geun-hye, the Ministry of Land, Transport and Maritime Affairs was reorganized into the Ministry of Land, Infrastructure and Transport. Its ocean-related functions were transferred to the Ministry of Oceans and Fisheries, and as its new name suggests, it was assigned the task of ensuring future-oriented national development as well as the construction and maintenance of safe and convenient infrastructure, including transport networks.

Ministry of Transportation

The Ministry of Transportation was established when the first Republic of Korea government was inaugurated in 1948. It was comprised of the office of the secretariat, five bureaus (Land Transport, Marine Transport, Facilities Management, Communication, Finance) and 29 departments.

The ministry's Land Transport Bureau had management over the Department of Public Roads. However, affairs related to road/port construction and road transport were under the jurisdiction of the Home Ministry's Construction and Public Security Bureaus. The supervisory authority over Road Construction was transferred from the Home Ministry's Construction Bureau to the Construction Ministry in 1961. From then on, the Construction Ministry was in charge of road construction affairs until 1994, when the Ministry of Construction and Transportation was established through the merger of the Transport and Construction ministries.

Ministry of Construction

In June 1961, the Reconstruction Ministry was reorganized into the Construction Ministry, which was turned into the National Construction Service affiliated with the Economic Planning Board the next month. In 1962, the service was abolished when the Construction Ministry was revived (with four bureaus and 15 departments). The ministry was assigned affairs related to roads eventually covering Land Use and Development, Urban Planning, Housing Construction, Water Resources Management, and Administrative Affairs Related to Roads and Rivers.

Ministry of Construction and Transportation

On Dec. 23, 1994, the Government Organization Act was amended to create the Ministry of Construction and Transportation (three offices, six bureaus, 59 departments) through the merger of the Construction and Transport

ministries.

In 1998, the Ministry of Construction and Transportation reorganized its structure, abolishing the Transport Safety Bureau. Four years later, it removed the Aviation Bureau, establishing the Office of Aviation Policy Coordinator and the Aviation Safety Headquarters. In 2003, it set up the Railway Policy Bureau.

Ministry of Maritime Affairs and Fisheries

On August 8th, 1996, the Ministry of Maritime Affairs and Fisheries absorbed the following organizations: the Maritime and Port Authority, the Fisheries Administration, the Waterway Bureau of the Construction-Transportation Ministry, and the Maritime Safety Tribunal. Additionally, the fishing community guidance department of the National Fisheries Promotion Institute was transferred to the ministry. As a result, the ministry was expanded to two offices, six bureaus and 37 departments.

In November 2007, the ministry newly created the post of a Port Redevelopment Planning Coordinator, and set up three news teams - Redevelopment Planning, Redevelopment Industrial, and Statistics & Planning. The reorganized ministry consisted of one office, two headquarters, three bureaus, eight policy coordinator's posts, and 49 teams. The ministry maintained this structure until it was merged into the Ministry of Land, Transport and Maritime Affairs.

Ministry of Land, Transport and Maritime Affairs

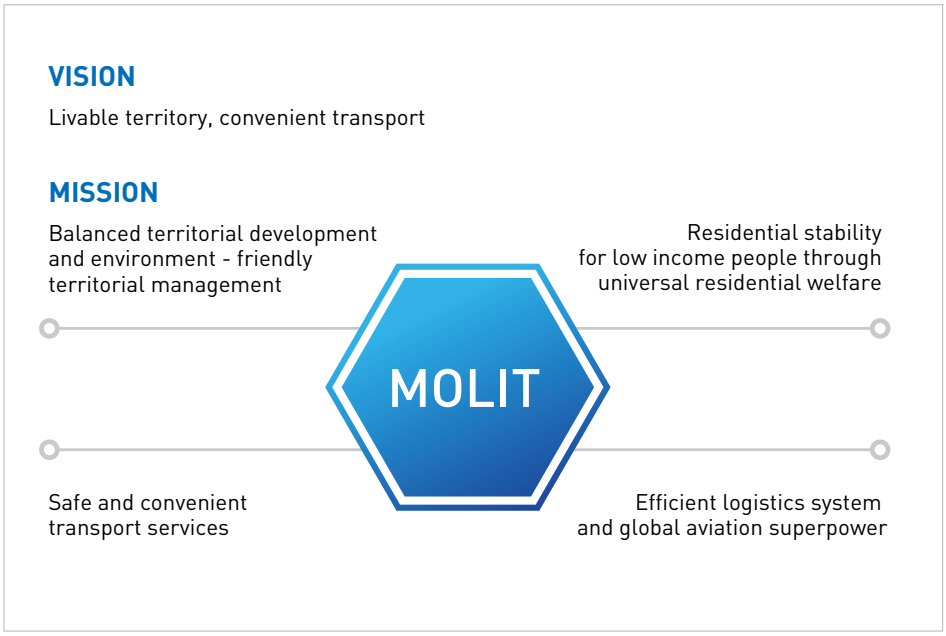
In accordance with the amendment of the Government Organization Act in February 2008, the Ministry of Land, Transport and Maritime Affairs was established through the merger of the Ministry of Construction and Transportation and the Ministry of Maritime Affairs and Fisheries.

The Ministry of Land, Transport and Maritime Affairs was responsible for the following tasks: development and adjustment of national development

plans, protection/use/development of land and maritime resources, city/road/housing construction, affairs related to coastal areas/rivers/ports and land reclamation, land/marine/rail transport and aviation, marine environment, marine research, and maritime resources development. The organization was comprised of two vice ministers, six offices, two bureaus, 22 policy coordinators, one spokesman, 100 departments, five teams and two centers.

Ministry of Land, Infrastructure and Transport

The organizational restructuring implemented following the inauguration of the new government led to the inauguration of the Ministry of Land, Infrastructure and Transport on March 22nd, 2013. It had two vice ministers, five offices and four bureaus. Maritime affairs such as maritime logistics, ports and the marine environment, which had been handled by the previous Ministry of Land, Transport and Maritime Affairs, were excluded from the scope of jurisdiction of the new ministry.



Through division of previous offices, the new ministry set up Construction, Water Resources, Road, and Railway Bureaus. It also downsized the organization by abolishing seven departments through mergers and integrations of closely related fields.

- Strengthening territorial and urban development functions: The Territorial Policy Bureau was upgraded in its status and turned into the Territorial and Urban Development Office.
- Separation of the construction and water resources sectors: The Construction and Water Resources Policy Office was divided into the Construction Policy Bureau and Water Resources Policy Bureau.
- Reinforcing the connections between transport and logistics: The Transport Policy Office was reorganized into the Transport and Logistics Office.
- The Road Bureau and the Railway Bureau were separated from the Transport Policy Office based on the consideration of various factors such as the budget size related to major modes of transport, the number of projects subject to management, and the need to intensify road and railway safety measures.

CHAPTER 5

Buildup of Transport Infrastructure and Economic Achievements

1. Changes in Transport Infrastructure Indicators

National Infrastructure Facilities

Systematic implementation of National Economic Development Plans led to an increase in the national land area as well as measurable improvement in national infrastructure such as industrial land spaces, paved roads and facilities for running water. The ratio of paved roads jumped from a mere 4% in 1946 to 76.9% in 2005, while the area of industrial plots expanded from 10 to 1,278 during the same period.

Table 5.1 Changes in national infrastructure (1946-2005)

Categories	Unit	1946	1960	1981	1991	2003	2005
Land area	km^2	94,299	98,431	99,016	99,300	99,601	99,646
Population	1,000 people	20,167	24,989	38,723	43,520	47,849	48,138
GNI per capita	dollar	-	79	1,741	6,757	13,460	17,531
Export (Current price)	USD $ 100 million	0.2	0.3	209	650	1,938	2,844
Industrial plots	km^2	10	39	332	475	1,172	1,278
Road pavement ratio	%	4.0	4.1	34.1	76.4	76.8	76.9
Running water	1,000 tons/day	240	517	6,756	16,891	28,252	-
Urbanization rate	%	17.0	39.2	67.9	79.6	89.0	90.2

Note: Per-capita GDP of 2003 and 2005 is based on 2005; 2005 per-capita GDP is based on Korea Industrial Complex Corp. data
Source: The Committee on the Sixty-year History of the Korean Economy, *60-year History of Korean Economy*, Korea Development Institute, 2010.

Roads and Railways

Expansion of transport facilities in the road and rail sectors since 2000 is considered to have contributed greatly to strengthening the nation's competitiveness, acting as the driving force of economic growth.

The total length of roads rose significantly from 56,715 km in 1990 to 105,565 km in 2010. Expressways, in particular, showed more than a twofold increase in length from 1,551 km to 3,859 km during the same period. The length of expressways increased 180% between 2000 and 2010.

The GDP of Korea, which was USD $ 9.5 billion in 1971 immediately after the opening of the Gyeongbu Expressway, amounted to USD $ 111.64 billion in 2010. During this period, the length of expressways increased sixfold, while the GDP expanded by 1,180%. These figures indicate a close relationship between the expressways and the GDP.

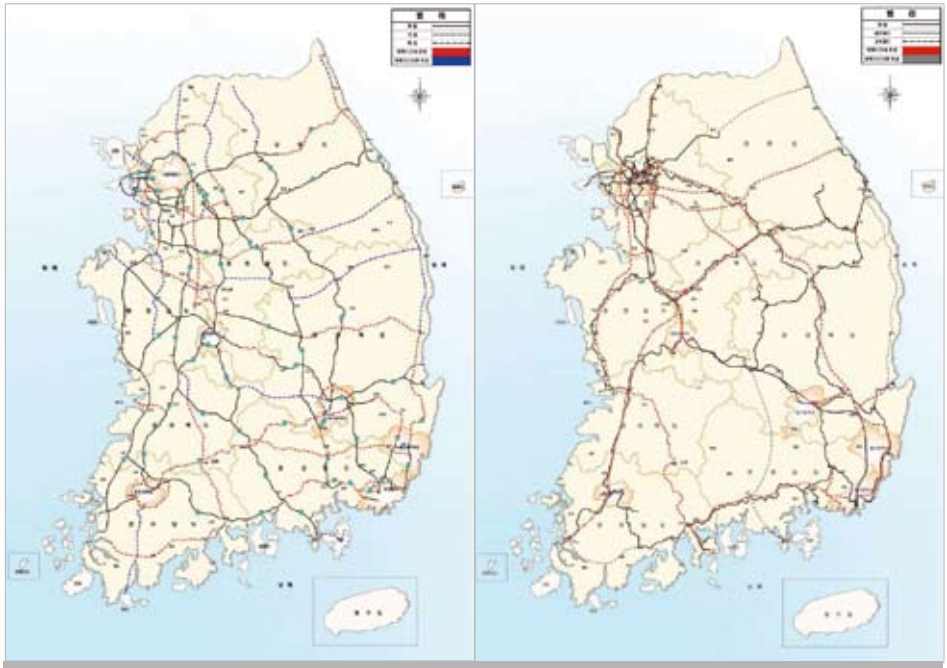
There was little change in the length of railways. However, the length of double-tracked railway lines rose from 847 km in 1990 to 2,301 km in 2010. Compared to 2000, the length of double-tracked railways increased by over 170% in 2010. The length of high-speed railways, which first opened in 2004, reached 368.5 km in 2010.

Such a continued expansion of transport infrastructure led to an increased transport capacity, playing a crucial role in strengthening the nation's competitiveness and expediting economic growth from 1970.

Table 5.2 Trends in the expansion of road and railway facilities (Unit: km)

Categories		1990	2000 (A)	2010 (C)	C/A
Road	Total length	56,715	88,775	105,565	1.19
	Length of expressways	1,551	2,131	3,859	1.81
Railway	Total length	3,091	3,516	4,094	1.16
	Length of double-tracked railway lines	847	1,332	2,301	1.73
	Length of high-speed railway lines	-	-	368.5	-

Figure 5.1 The Revised 4th Comprehensive National Territorial Development Plan (2006-2020)



National Arterial Road Network Plan (2011-2020)

National Railway Network Plan (2011-2020)

2. Changes in Economic Growth Indicators

Transport Infrastructure Development and GDP Growth

Infrastructure refers to basic facilities vitally needed for the economic and social development of a nation, a region or a city. They include facilities necessary for urban development and maintenance, transportation and logistics, water supply and hygiene, energy supply and information communications.

Korea maintained an economic growth rate of around 9% for a 30-year period since 1960. Behind such growth was a consistent investment in infrastructure, through which the nation could continually promote high value-added sectors as its core industries.

The development of the light industry, which was actively pursued during the early stages of the nation's industrialization in the 1960s, was based on the construction of industrial estates. The Heavy-Chemical Industry Drive of the 1970s was related to the establishment of heavy industrial complexes. The growth of high-tech industries during the 1980s was based on the formation of the middle class as well as diversification in consumption patterns. The expansion of high-tech sectors in the 1990s had much to do with the active promotion of R&D based on the development of information communications networks.

Table 5.3 Korea's industrialization and infrastructure build-up

Categories	1960s	1970s	1980s	1990s	2000s
City	Industrial cities	New industrial cities	Olympics	Self-reliant new cities	Urban maintenance
Water	Large-size multi-purpose dams and huge-scale water supply networks		Small and mid-size multi-purpose dams and water and sewage systems		
Transportation	Railways	Expressways and electrified railways		New ports, new international airports, high-speed railways, city/county roads	
Energy	Hydro, thermal power plants		Nuclear power plants		Renewable energy-based power generation facilities
Communications	Landline phone network		Mobile phone and wireless calling network	CDMA mobile phone network and the Internet	
Per capita GDP (USD $)	100 - 200	200 - 600	600 - 1,600	1,600 - 2,500	2,500 - 5,500	5,500 - 10,000	10,000 - 11,000	11,000 - 15,000	15,000 - 23,000
GDP at current $ value	500 - 800	800 - 1,750	1,750 - 3,200	3,200 - 4,000	4,000 - 7,500	7,500 - 12,000	12,000 - 13,000	13,000 - 15,000	15,000 - 21,000

Source: Ministry of Land, Infrastructure and Transport, Hyundai Research Institute (2013), Korea's Infrastructure Development and Economic Growth – Infrastructure Development Training Program

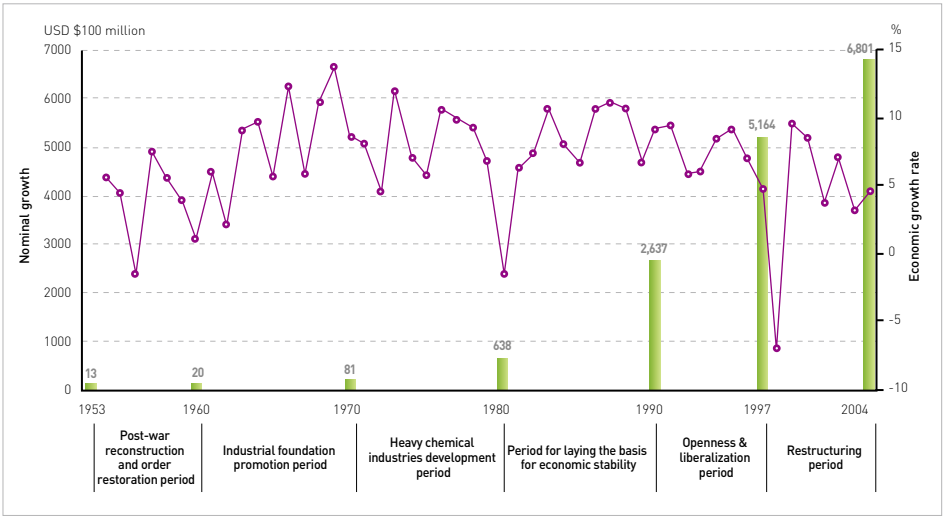
Changes in the Economic Growth Rate and GDP[14]

Korea achieved an average annual growth rate of 6.9% between 1953 and 2004, according to the economic statistics[15] tallied since 1953, when the

14) "60-year History of Korean Economy" (2010), The Committee on the Sixty-year History of the Korean Economy, Based on extracts from chapter 2 dealing with macroeconomic analysis.

15) Bank of Korea Economic Statistics Bureau (2005), 60 Years of Independence: Overview based on numbers.

Figure 5.2 Trends in nominal GDP and the growth rate



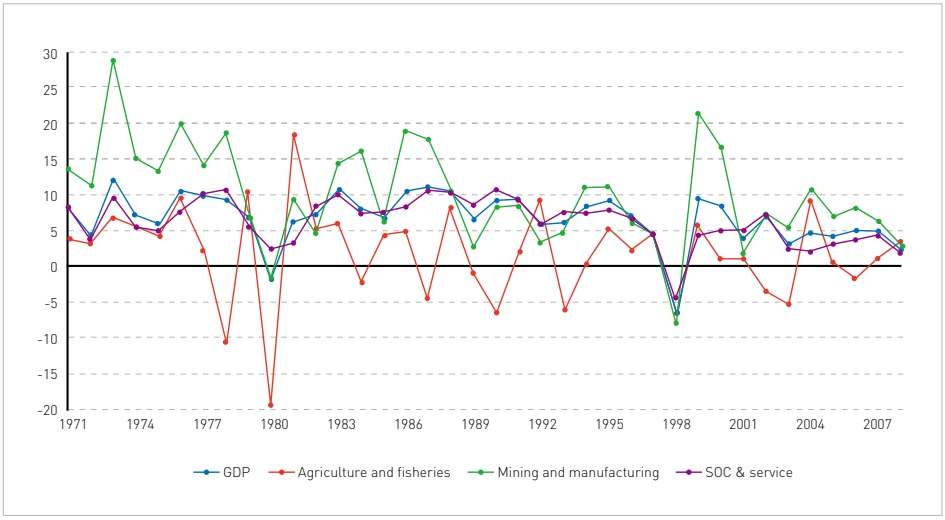
national income began to be estimated. The data also shows that the nation's GDP amounted to USD $680.1 billion in 2004, an achievement that was largely attributable to the successful implementation of Five-Year Economic Development Plans. The average annual growth rate was 7.4% between 1954 and 1996. After the nation was hit by the financial crisis of 1997, the national economy went through a restructuring period, recording lower growth rates compared to the previous years. The average growth rate hovered around 10% from 1976 to 1978 amid recovery of the global economy.

By industry, the agriculture and fisheries sector showed an average annual growth rate of just 2.5% over the past 55 years, while the mining and manufacturing sector recorded an average growth rate of 11.4% during the same period. The SOC and service sector attained a 6.6% annual growth rate on average, which was slightly below the average of all sectors.

Over the past 55 years, investment expanded at an average growth rate of 11.6%, more than twice as high as 5.7% recorded for consumption. The growth rates of export and import stood at 16.9% and 12.4%, respectively.

To a considerable extent, the growth of the Korean economy was based on the expansion of the manufacturing sector. The agricultural and fisheries

Figure 5.3 GDP growth rate by industry (1971-2007)



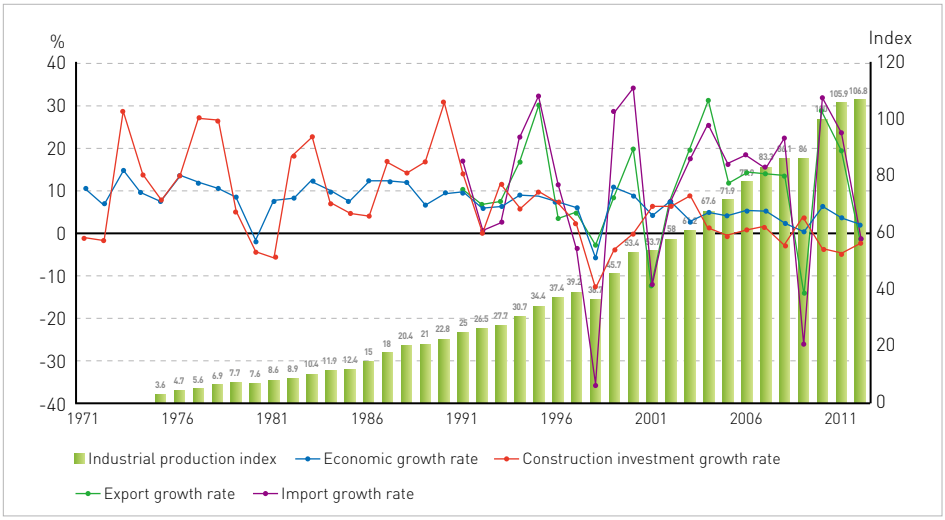
sector recorded an average annual growth rate of 3.3% until the late 1980s. In the 1990s, however, it showed a much lower rate of 0.9%.

Although declining gradually since the start of Five-Year Economic Development Plans in 1962, the annual growth rate of the mining and manufacturing sector continued to exceed an average of 7% even after the 1980s. Between the late 1980s and the early 1990s, the mining and manufacturing industries grew at lower rates than the national GDP. During a short period around the 1997 financial crisis, the sector also showed a relatively poor performance.

During the 1971-1976 period, the national GDP expanded at an average of 8.1% a year, whereas the SOC and service sector grew at a lower rate of 6.6%. The sector's average yearly growth rate, however, shot up to 8.4% between 1989 and 1993. The national GDP and the SOC and service sector generally show similar patterns in terms of the growth rate.

The SOC and service sector, which accounted for 45.4% of the national GDP in 1961, continued increasing with the relative contraction of the agricultural sector, thus growing to over 50% in the 1970s and 56-60% in the 1980s. The share of the SOC-service industries further rose to 63-68% in

Figure 5.4 Comparison of economic growth rates and construction investment growth rates (1971-2012)



Source: Bank of Korea Economic Statistics System ECOS (http://ecos.bok.or.kr)

the 1990s and to 68-69% between 2006 and 2007.

Figure 5.4 illustrates growth rate trends of the national economy and construction investment between 1971 and 2012. It also shows the trends in the 2010-based industrial production index (mining, manufacturing, etc.) as well as import export growth rates.

CHAPTER 6

Conclusions and Policy Suggestions

1. Second Saemaul Undong and ODA Projects

In the late 2000s, Saemaul Undong began pursuing a Second Saemaul Undong (or "Second New Community Movement") while advocating three new principles; change, challenge and creation.

The new movement is actively promoting the following four major campaigns:

- Green Korea Campaign: realization of green lifestyles through low-carbon green growth, restoration of four major rivers, prevention of global warming, recycling energy resources, etc.
- Smart Korea Campaign: enhancing the dignity of Korea and its' citizens as an advanced nation, observance of law and basic order, observance of global etiquette, a campaign to be thoughtful and considerate of others, a book reading campaign, etc.
- Happy Korea Campaign: creating a livable community that cares about underprivileged people, helps poor families, supports for the settlement of multicultural families in Korea, promoting a culture of donation, ensuring disaster safety, etc.
- Global Korea Campaign: creation of a global village filled with hope, Saemaul training for foreigners, Saemaul cooperation projects, support for overseas Saemaul organizations, promotion of overseas Korean

youth volunteer activities, etc.

Amid changes in the perception of ODA in the international community, Saemaul Undong is being internationalized and adopted as a model for international cooperation for growth and development. The efforts to internationalize Saemaul Undong began with the first pilot project launched by KOICA (Korean Foreign Ministry) in 2002. The project is being expanded through ODA advancement measures prepared in October 2010.

Table 6.1 Saemaul Undong ODA projects implemented by relevant organizations[16]

Competent organizations	Contents
Foreign Ministry (KOICA)	Promotion of comprehensive ODA projects related to rural development
Finance Ministry (EDCF)	Promotion of large-scale agricultural infrastructure projects based on development experience and KSP
Ministry of Agriculture, Food and Rural Affairs	Pursuing international cooperation in the agricultural sector
Rural Development Administration	Placing emphasis on "agricultural technology cooperation"
Ministry of Security and Public Administration (National Council of Saemaul Undong Movement and North Gyeongsang Province)	Promoting training programs oriented toward "cognitive enhancement" and village income enhancement projects

Overseas pilot programs for localized Saemaul Undong were first implemented under the sponsorship of the U.N. Economic and Social Commission for Asia and the Pacific (UNESCAP) in 2003, targeting three Asian developing countries - Nepal, Cambodia and Laos. Since then, they have been steadily expanding to cover numerous other developing countries.

Table 6.2 Overseas Saemaul pilot projects (2009-2011)

Classification	1st year (2009)	2nd year (2010)	3rd year (2011)
Total	18 villages in 9 countries	17 villages in 10 countries	15 villages in 8 countries
Countries	Mongolia, Nepal, Laos, Cambodia, the Philippines, Uganda, Tanzania, Congo, Cote d'Ivore	Mongolia, Nepal, Laos, Cambodia, the Philippines, Uganda, Tanzania, Madagascar, Congo, Senegal	Mongolia, Nepal, Cambodia, Uganda, Tanzania, Madagascar

Source: National Council of Saemaul Undong Movement in Korea (2011), Saemaul Undong Globalization Plans

16) In May 2011, the Prime Minister's Office established a framework plan for implementation of Saemaul Undong ODA projects in order to ensure comprehensive and effective execution of the projects which had previously been carried out separately by various organizations.

Forthcoming Saemaul Undong ODA projects will be implemented under the following four guidelines:

- Employ a new approach designed to have the aid recipients develop their own will for self-reliance, helping them develop the capacity to make decisions on major issues affecting their villages
- Design a basic model for implementation of Saemaul Undong ODA projects, making it possible to ensure their integrated management by a relevant organization
- Select a model village, using the successful implementation of a pilot project there as an example when expanding it to cover other villages
- Aim to make inroads overseas in a way that can meet the directions desired by the international community

2. Conclusions and Policy Suggestions

Basis for Korea's Economic Growth Formed Through Saemaul Undong

- The Korean War devastated the nation's railway sector, which exclusively provided the means of transport for import and export cargo. Specifically, 61% of trains, 56% of power facilities and 7.5% of railway tracks were destroyed. Due to the miserable state of the railways, Korea faced enormous difficulties in implementing economic activities at home and abroad.
- From then on, the nation exerted enormous efforts to build its transport infrastructure. They led to the construction of prominent transport facilities such as Gimpo International Airport (1958), Gyeongbu Expressway (1970), Busan Port (1978), Incheon International Airport (2001), and KTX or the Korean high-speed railway system (2004). The infrastructure build-up laid the groundwork for achieving the nation's remarkable economic growth.
- In the 1970s, the nation launched Saemaul Undong as a movement to improve the living conditions and production infrastructure of rural

villages. To facilitate farming activities, it implemented works to widen agricultural roads, which were later expanded in scope to widen roads within and between villages. Meanwhile, the state carried out mid and long-term projects such as Five-Year Economic Development Plans and Comprehensive National Development Programs, which made it possible to build up transport infrastructure such as expressways, railways, airports and ports.

- Based on the expansion of transport infrastructure, Korea achieved rapid economic growth. It recorded an average annual growth rate of 7.4% between 1954 and 1996.

Lessons of Saemaul Undong; Need for Second Saemaul Undong

- Korea was an extremely poor country right after the Korean War. Now, it is a global economic power. It has set a world record in terms of its rapid transition from a recipient of international aid to a donor country.
- Saemaul Undong, which started as a voluntary public campaign aimed at prosperity, has expanded to cover various areas, including the transport infrastructure sector, contributing significantly to what Korea is today.
- In 2012, Korea's per-capita GDP amounted to nearly USD $24,000. The nation is one of the global top 10 economic powers. Based on 2010 statistics, Korea is ranked seventh and ninth, respectively, in terms of export and trade levels. Now, it needs another social movement for a second leap forward.
- In a public survey about Saemaul Undong[17] respondents said the movement needs new guiding principles in addition to the existing ones; diligence, self-help and cooperation. They referred to such values as sharing (76.2%), service (59.8%), creation (57.5%), change (53.2%) and challenge (43.0%). As important tasks, the respondents cited

17) Global Saemaul Forum, A Survey of Public Awareness of Academic Pursuit of Saemaul Undong and its Globalization.

various programs such as a "community campaign enhancing a sense of togetherness (40.2%)," a "campaign to advance the level of public awareness (28.0%)," a "campaign for regional regeneration (27.0%)," a "environmental protection campaign (24.9%)," a "campaign to embrace various cultures (20.6%)," a "campaign to remove poverty in developing countries (14.7%)," a "migration campaign to return to hometowns and rural communities (12.7%)," a "campaign for industrial development of developing countries (10.0%)," and a "campaign to promote national reunification through development of North Korean rural communities (9.7%)."

- It is necessary to exert efforts to pursue common prosperity of the international community through active implementation of the Knowledge Sharing Program that is designed to transfer Korea's development experience and knowhow to developing countries.

Second Saemaul Undong in the Transport Sector

- Saemaul Undong should also change in the transport sector as well. It previously emphasized prosperity by launching projects to widen agricultural and inter-village roads. It needs to evolve into a new movement to pursue increased convenience, improvement in quality of life, and other measures for enhancing public welfare.
- When building new transport infrastructure, the government should focus on the need to promote balanced national development, ensure basic mobility rights, and improve travel conditions in crowded areas. It should also ensure IT technology-based sophistication of infrastructure operation and management techniques while pursuing a strategy to improve the efficiency of infrastructure operation.
- It is essential to ensure voluntary public participation in the Second Saemaul Undong. As a way of achieving this objective, endeavors should be made to establish a new transport culture aimed at congestion reduction and safety improvement.
- Establishing an advanced traffic culture requires relevant civic

campaigns designed to reduce congestion and improve traffic safety. They may include campaigns to observe limit lines and moving regulations at intersections as well as speed limits at designated areas for the safety of children and people with mobility handicaps.

References

Bank of Korea Economic Statistics Bureau (2005), 60 Years of Independence: Overview based on numbers

Bank of Korea Economic Statistics System ECOS (http://ecos.bok.or.kr)

Chang Hwan Mo (2012), Korea Association for Policy Studies, Association between the Government Organization and its Policies: The effects of the transport administrative organization on transport policies and suggestions for reorganizing the transport administrative organization

Cheongdo County (2012), Saemaul Undong's Birthplace, Cheongdo: The 42-year history of Saemaul Undong (1969-2011)

Cheongdo County (2013), A Collection of Photos on Saemaul Undong's Birthplace

Cheongdo County (2013), A Story on Saemaul Undong's Birthplace, Sindo Village: 43 days that have changed the world

Cheongdo County, North Gyeongsang Province (2012), Saemaul Undong's Birthplace, Cheongdo: 42-year history of Saemaul Undong (1969-2011)

Korea Development Institute (2009), Use of the Saemaul Undong-related Policy Experience in the 1970s

Korea Institute for Public Administration (2012), Research Report 2012-36 Korea's Saemaul Undong: Harmony between result-oriented resources management and self-organizational activities

Korea Research Institute for Human Settlements (2005), Il Ho Jeong et al., A Study on Transport Infrastructure Planning for Territorial Innovation

Korea Research Institute for Human Settlements (2005), Jin Kwang Soh, Seon Hi Kim, Ways of Using Saemaul Undong as an ODA Project

Korea Research Institute for Human Settlements (2012), Dong Ju Kim et al., Strategy for Developing Future National Territory and Ensuring a Balanced National Development

Korea Research Institute for Local Administration (2013), KRILA Focus No. 56, Policy Directions for Saemaul Undong as a National Brand

Ministry of Home Affairs (1980), 10-year History of Saemaul Undong & 10 Years of History (collection of relevant data)

Ministry of Land, Transport and Maritime Affairs, KOTI (2012), 2011 Project to Develop Economic Development Experience Modules: Institutional systems for building transport infrastructure facilities and the related funding sources

Ministry of Land, Transport and Maritime Affairs, Hyundai Research Institute (2013), Korea's Infrastructure Development and Economic Growth - Infrastructure Development Training Program

Ministry of Public Administration and Security (2008), White paper on government restructuring

National Council of Saemaul Undong Movement in Korea (2011), New Saemaul Undong

National Council of Saemaul Undong Movement in Korea (2012), 40 Years of Saemaul Undong & A collection of Data on Saemaul Undong

Prime Minister's Office (2011), A Framework Plan for Execution of Saemaul Undong ODA Projects

Saemaul Undong Research Association of University Professors (2010), 40-year History of Saemaul Undong

The Committee on the Sixty-year History of the Korean Economy (2010), 60 Years of Korean Economy

The Driving Force of Korea's Economic Growth:

Saemaul Undong and Transport Infrastructure Expansion

The Korea Transport Institute (KOTI) is a comprehensive research institute specializing in national transport policies. As such, it has carried out numerous studies on transport policies and technologies for the Korean government.

Based on this experience and related expertise, KOTI has launched a research and publication series entitled "Knowledge Sharing Report: Korea's Best Practices in the Transport Sector." The project is designed to share with developing countries lessons learned and implications experienced by Korea in implementing its transport policies. The 13th output of this project deals with the theme of "The Driving Force of Korea's Economic Growth: Saemaul Undong and Transport Infrastructure Expansion."

93530
9 788955 036244
Price 15,000 Korean Won
ISBN 978-89-5503-624-4