

**RECASTING KOREAN AGRICULTURE AND ITS POLICY**

**BY COMPARISON WITH THE NETHERLANDS**

**By**

**Hee-Won Chang**

**THESIS**

Submitted to  
KDI School of Public Policy and Management  
in partial fulfillment of the requirements  
for the degree of

**MASTER OF PUBLIC POLICY**

2013

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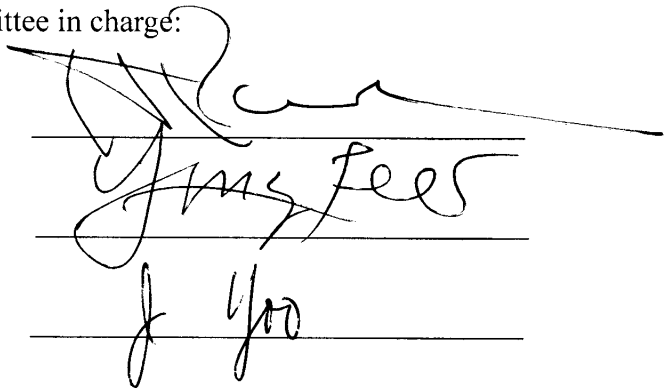
**MASTER OF PUBLIC POLICY**

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Approval as of December, 2013

## **ABSTRACT**

### **RECASTING KOREAN AGRICULTURE AND ITS POLICY BY COMPARISON WITH THE NETHERLANDS**

**By**

Hee-Won Chang

Most people have implicitly believed that it is very outdated and primeval when they think of the word ‘Agriculture.’ From a commonsense standpoint, people of all social strata have recognized cutting-edge technologies, i.e. ICT, BT, and NT, as new growth engines. Since agriculture has not contributed to the economic growth, it is the first priority to be substituted for future industries. Also, in perspective of a traditional theory of economic development, the agricultural industry has become a declining industry. Colin Clark and Allan G. B. Fisher provided a theoretical basis, which explains why an economic structure first shifts from agriculture to manufacturing, and then to services in the course of economic progress. This transition has been in progress around the world since the start of the Industrial Revolution in England in the 18th century.

However, we can easily find exceptional cases going counter to current world trends. For a few advanced countries, the agricultural industry has so far been an important role in their nation’s economy. The Netherlands, for instance, is the second largest agricultural exporting country after the U.S. They attribute most of its trade surplus to agrifood trade. The total national economic activities for the agricultural complex account for 10 per cent of the total national added value and national employment. Even though, the Netherlands

agricultural resources are scarce. In a small land area less than 42,000 km<sup>2</sup>, almost half of the land is below sea level as suggested by the meaning of the word 'low(nether).' The history of the Netherlands is marked by war with water. The Dutch have not only prevented the loss of farmland from frequent inundations and floods by building dikes, but also secured a reclaimed ground called 'Polder' through reclamation projects.

Nevertheless, in spite of inferior natural conditions and the inevitable decline of agriculture evidenced by a traditional economic theory, what makes the Netherlands the advanced power nation in agriculture in the world? The central theme of this thesis has emerged from my curiosity about the early stage of the formation of a nation, whereby most countries began with agriculture historically. Why did some countries attain huge success in agriculture while others did not?

I examine why the agriculture industry in South Korea is depressed and left behind in productivity, efficiency, and profitability. To understand the causes of these endemic problems, I compare the historical development of South Korean agriculture with that of the Netherlands, a highly successful agricultural economy in Europe in terms of the geographical location, climate, agricultural history, public policy, and the free market structure. While South Korea is different from the Netherlands in many attributes to say the least, I find that the most striking difference is the historical negligence of South Korea's governments in the development of economic incentives and infrastructure conducive to a productive agri-economy. But, the most serious is the strategic choice that the recent military regime under Park and Chun had made to favor the development of the export-oriented industry with the relegation of agriculture to the back seat. The *Saemaul Movement* was a shot in the arm, but it was insufficient to turn the tide.

In terms of different background of agricultural development, I can determine three most important obstacles to agriculture advancement with lessons from Dutch agriculture.

First, the industrial support policy was biased towards certain social and economic groups. The early economic development plans for modernization focused on the unbalanced economic policies which concentrated on certain economic groups and selected industries as well as a few conglomerates. Based on the sacrifice of the majority of members of society, the system that the minority monopolize interests has been maintained until now. Therefore, agriculture has been excluded from the priorities of the national economic plans.

Second, there is the long-term absence of a commitment to develop a high quality human capital. Historically, it is proven that Korean farmers were not independent agents of economic activity, but only poor tenants for maintaining the ruling classes. Therefore, there are not enough outstanding individuals to accept capital and technology. No matter how remarkable technologies and fertile land are, land and capital productivity will not grow without excellent workforces to operate technologies and cultivate land.

One of the reasons that the Netherlands could be the most powerful nation in Europe in the 17th century, known as the 'Golden Age' in Dutch history, was that there was a huge influx of excellent workers who escaped from religious persecution during 'the Reformation.' The Netherlands give us a lesson that in the capitalist market economy, competitive farmers could themselves be fostered through competition, not by the government and its regulations.

Third, without a social agreement schemes by democratic procedures, agriculture industries were forced to sacrifice and were not granted fair compensation. In South Korea, the tradition of a national social agreement has still not been sufficiently established. Therefore, people have overlooked the importance of agriculture and have regretted huge investments in agriculture. For the desirable development of agriculture, a solid national consensus is needed. To solve these endemic problems, like the Social Economic Council (SER) in the Netherlands, we need to set cooperative governance for realizing our agricultural policies efficiently.

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**Dedicated to the memory of my late father**



# TABLE OF CONTENTS

<b>I. INTRODUCTION</b> .....	1
Statement of the Research Question.....	1
Purpose and Research Method.....	7
<b>II. BRIEF COMPARISON BETWEEN SOUTH KOREA AND THE NETHERLANDS</b> .....	9
Natural Situations Causing Differences in Production Structure.....	9
Agriculture’s Contribution to the National Economy.....	13
<b>III. THE STRUCTURE OF THE AGRICULTURAL INDUSTRY</b> .....	16
Great Imports Make the Netherlands the Second Largest Exporter in the World.....	16
Family-Managed and Specialized Conglomerates by Ownership .....	21
The Contrastive Purpose of Huge Government Subsidies.....	28
<b>IV. THE COMPARATIVE ORIGINS OF THE AGRICULTURAL DEVELOPMENT</b>	
<b>POLICY</b> .....	30
The Open Market Policy of the Netherlands .....	32
The Golden Age of Broadening the Agriculture Market Territory.....	35
Endeavoring to Stick to the Free-Trade Principles around 1850.....	39
Overcoming Protectionism after World War I-II and the Great Depression .....	43
South Korea’s Protectionist Policy for Rapid Economic Growth.....	46
Land Reforms: the Failure of Agriculture Modernization.....	48
The Weakened Foundation of Agricultural Economic Development by Unbalanced	
Modernization in the 1960s.....	50
The Saemaul Movement of the 1970s Focuses on State Populism.....	53
<b>V. CONCLUSION</b> .....	58
Main Obstacles to Agricultural Advancement with Lessons from Dutch Agriculture .....	58
<b>BIBLIOGRAPHY</b> .....	63

## LIST OF TABLES

Table	Page
1. Natural Differences Between the Netherlands and South Korea.....	10
2. Gross Value Added and Employment of the Dutch Agricultural Complex.....	13
3. Global Exports of Agricultural Products.....	17
4. Comparisons of Open Trade Between Netherlands and South Korea.....	19
5. Changes in Agricultural Population, Land, and Farmhouses in South Korea.....	22
6. Workers in Agriculture and Horticulture in the Netherlands.....	23
7. Agrarian Holdings in the Netherlands by Ownership.....	24
8. International Comparisons of Agricultural Subsidies in 2011.....	28
9. Indicators of Population Changes in South Korea.....	55
10. Compositions of Agriculture Household Income in South Korea.....	56

## LIST OF FIGURES

Figure	Page
1. Shares in Value Added by the Three Sectors of the World.....	4
2. Shares of Agriculture GDP in National Total GDP of South Korea.....	14
3. Changes in Agricultural Land in South Korea by Size.....	22
4. Shares of Side Work and Full-Time Farmers in South Korea.....	25
5. Dutch Farm Sizes.....	27
6. The Exports of Agricultural and Horticultural Products in the Netherlands.....	40
7. Ratio of Farm Households' Income to Urban Labour Income in South Korea....	56

# I. INTRODUCTION

## Statement of the Research Question

Despite its rapid economic restructuring for more than 30 years, Korean agriculture has still been suffering from the obstacles of external market-opening pressures and its reduction of internal growth power. Many Korean economists and journalists have firmly argued that compressed modernization provokes the decay of agriculture. They oppose the huge budgetary allocations, 5.4 per cent of the national total budget in 2013,<sup>1</sup> on agriculture for several reasons.

First, the external risk is the pressure (FTA and WTO/DDA Negotiations) to open our agriculture market to the world open-market. The South Korea economy has been heavily dependent on an export-oriented economic structure since the early economic growth that began in the 1960s. Therefore, the market liberalization of agriculture is the harsh reality for surviving in the global economy. The high tariff barriers and the domestic subsidies, the protector for our agriculture from serious competition in the world market, should be reduced substantially by those market-opening pressures. As a result, the imports of cheap foreign agricultural products increased. Due to the oversupply of agriculture products from foreign markets, the prices of the domestic farm produce dropped rapidly, diminishing the farm household income. Consequently, the serious deterioration of the farm household economy and the hollowing out phenomenon of agricultural districts became endemic problems in South Korea.

Second, not only is the open agriculture market faced with the accelerated progress of

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<sup>1</sup> Ministry of Agriculture, Food and Rural Affairs, *The Summary of Budget and Fund Operation Plan in 2013* (Sejong : Ministry of Agriculture, Food and Rural Affairs, 2013), 101.

the FTA and WTO/DDA Negotiations on agriculture, but also South Korea has unfavourable natural resource endowment. It's population density in 2010 was 490 people/km<sup>2</sup>, ranked as the world's third-highest, which is twenty-one times higher than all developed countries (23 people/km<sup>2</sup>) as well as seven times higher than all developing countries (68 people/km<sup>2</sup>).<sup>2</sup> Supporting a large population with little land eventually results in expensive land. And, rapid economic growth induced a rural exodus and high wages. Agricultural production costs skyrocketed in part due to the expensive land prices and wage levels. These costs are three or four times higher than such strong competitors as the United States and China. Therefore, the gap between domestic and foreign prices of agrifood has widened. As mentioned above, with the inferiority in comparison with agricultural production elements, the international competitiveness of South Korea's agriculture has been steadily getting worse. Since the Agreement on Agriculture was adopted as part of the Final Act of the Uruguay Round in December 1993, no one has hesitated to forecast the desperate outlook of South Korea's agribusiness entering into the era of open markets.

According to views of market-friendly economists, the question is, 'Isn't it more beneficial for the welfare of the people to import China's rice priced at 30,000 won per 80kg than expand the budget on assistance for domestic rice priced at 160,000 won per 80 kg.' They firmly insist that the agriculture sector should be severely thrown to the competitive market whether it dies or not. It would be more efficient to just import more cheap and diverse food from several agricultural producers such as China, the world's largest rice producer, and the US, the world's largest maize producer, whenever it is needed.

This opinion is theoretically based on the transitology of industry structure by Colin Clark and Allan G. B. Fisher who insist that in the course of economic progress, labour and capital move naturally from agricultural to industrial, and then to service industries.

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<sup>2</sup> Jin-geun Seong, Tae-ho Lee and others, *Agriculture is the future: The strategy for Korea's agricultural renaissance* (Seoul: Samsung Economic Research Institute, 2011), 48.

Therefore, this theory has provided the theoretical evidence that the decline in agricultural industry has been an inevitable consequence for a long time. Thus according to Colin Clark and Allan G. B. Fisher:

... Low real income per head is always associated with a low proportion of the working population engaged in tertiary production and a high percentage in primary production . . . A high average level of real income per head is always associated with a high proportion of the working population in tertiary industries. (Primary industries are defined as agriculture, forestry and fishing; secondary industries as manufacturing, mining and building; the tertiary industries include commerce, transport, services and other economic activities.) The reasons for this growth of the relative number of tertiary producers must largely be sought on the demand side. As incomes rise the demand for such services increases, and being non-transportable they must be supplied by workers within the country concerned . . . Generally speaking, the main dynamic of economic advance has been rising income per head in either secondary or tertiary industry, often in both, and the transfer of population away from primary industry.<sup>3</sup>

We may say that in every progressive economy there has been a steady shift of employment and investment from the essential "primary" activities, without whose products life even in its most primitive forms would be impossible, to secondary activities of all kinds, and to a still greater extent into tertiary production... The shift of employment towards secondary and tertiary production revealed by the census are the inescapable reflections of economic progress.<sup>4</sup>

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<sup>3</sup> Colin Clark, *The Conditions of Economic Progress*, 1st ed., (London: Macmillan, 1940), 6-7, 12, quoted in Harvey S. Perloff, "Interrelations of State Income and Industrial Structure," *The Review of Economics and Statistics*, Vol. 39, No. 2 (May, 1957): 162.

<sup>4</sup> P. T. Bauer and E. S. Yamey, "Economic Progress and Occupational Distribution," *Economic Journal*, LXI (1951), 747, quoted in Surinder K. Mehta, "A Comparative Analysis of the Industrial Structure of the Urban Labor Force of Burma and the United States," *Economic Development and Cultural Change*, Vol. 9, No. 2 (Jan., 1961): 165.

The cause of the relative decline of agriculture can be described from both the supply and the demand side of agricultural products. First, the limited land area, the law of diminishing returns, and the relative stagnation of advances in technology have made agricultural productivity low relative to the tertiary industry. Given that situation, it has been more difficult to accumulate capital in the agricultural sector, which has resulted in the low productivity of agriculture. Since the gap between productivity and the efficiency of resources, the supply of production resources (labour and capital) has naturally moved from an agricultural to an industrial or service sector by market signals. Second, because of a lower level of the income elasticity of the demand for agricultural products comparable to manufactured goods, the output growth rate of the agricultural sector is relatively low compared to the industrial sector, which has caused the relative decline of agriculture.<sup>5</sup>

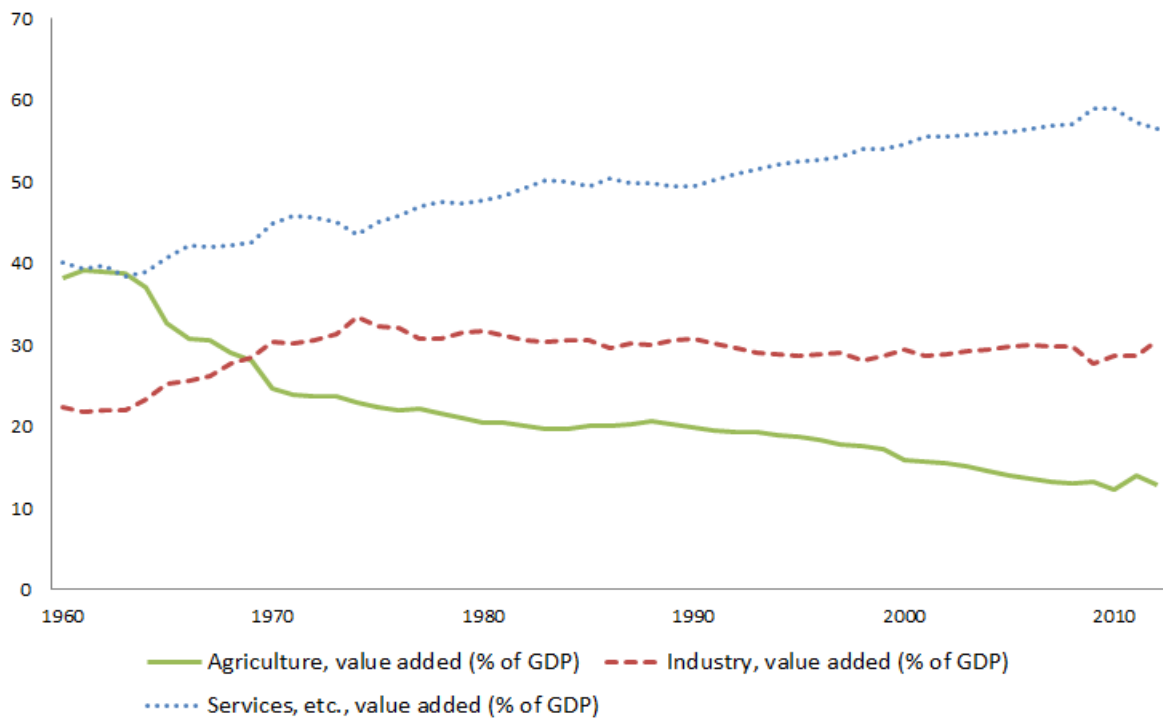


Figure 1. Shares in Value Added by the three Sectors of the World (per cent of GDP)

Source: World Bank national accounts data, and OECD National Accounts data files.

<sup>5</sup> Jingeun Seong, Taeho Lee and others, *Agriculture is the future: The strategy for Korea's agricultural renaissance*, 142-143.

Figure 1 shows the transition of the economic sector from an agricultural to an industrial economy. When measured in terms of the share of value added by the three sectors - agriculture, industry and service, the argument of Colin Clark and Allan G. B. Fisher is firmly supported. The share of agriculture in the global gross domestic product has been given too little weight in recent years. The proportion in industry and service rose rapidly until the middle of the 1970 and since then the service's share has increased more sharply than the industry's share.

However, among developed countries, a few have risen to the rank of a developed country based on agriculture. For instance, New Zealand became a developed country because of agriculture and then developed its tourism and service industries. They have developed a value-added agricultural export industry through the specialization and development of meat and milk processing industries along with competitive livestock sectors such as beef cattle, dairy, and sheep. In addition, horticultural sectors such as kiwi and wine comprise another major exporting industry. New Zealand has early recognized that with abundant natural resources, agriculture was the industry most likely to survive and succeed in a competitive world economy.

Another example is the Netherlands, renowned for its agriculture throughout the world. Unlike New Zealand, the Netherlands with its limited natural resources such as a small and densely populated land area as well as unfavourable climate with only average 25 sunny days for the entire year has a huge export of agricultural products. Of all nations, its "net agricultural trade volume [is] second only to the United States."<sup>6</sup> When compared with South Korea, the trade volume (total trade balance, total exports and imports) of the Netherlands is similar. However, there are huge differences in the trade balance specific to the export of products in the agricultural sector. Both countries' agricultural production scale

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<sup>6</sup> Haifa Feng, *Agricultural development in the Netherlands: An analysis of the history of Dutch agricultural development and its importance for China* (The Hague: LEI Wageningen UR, 1999), 11.



is similar (the Netherlands was 34,600 in million dollars in 2008 and South Korea was 36,071 in million dollars in 2010), but the Netherlands's total export of agricultural products is eight times greater than South Korea's (the Netherlands was 86,651 to South Korea's 10,613 in million dollars in 2010). Furthermore, the Netherlands's agriculture industry trade surplus accounts for more than 50 per cent of the nation's total trade surplus (see Table 4). Conversely, South Korea has suffered from endless chronic deficits and has never once brought trade surplus positively into the agriculture sector. In short, while to some countries agriculture has long been a golden goose, for other countries, agriculture has been the troublemaking element of the nation's economy that has neither been resolved nor improved.

Considering the practices mentioned above, the problem is not agriculture itself, nor an inferiority of natural resources, but an incredibly ineffective approach to agriculture. We can learn the diverse success factors of the agriculture industry from such agriculturally advanced countries as the Netherlands. In this thesis, I will analyze the reasons for such great achievements and the underlying factors of such a small county with its permanent natural handicaps.

## Purpose and Research Method

The central theme of this thesis has emerged from my curiosity about the early stages of the formation of a nation, whereby most countries have begun with agriculture historically. Why did some countries attain huge success in agriculture and other countries not? I think that if we can analyze the key successful factors of powerful agricultural nations and compare our nation's agriculture to those factors, we may disentangle the distinction between success and failure and begin to develop better agricultural policies and environments. Among countries that have enjoyed great agricultural success, I have selected the Netherlands, the world's second exporter of agricultural products.

Dutch agriculture has, without any doubt, an outstanding infrastructure beyond compare. Its assets include excellent harbor systems with logistic processes optimization, the Social Economic Council (SER), which makes it possible to carry out balanced economic policy between agriculture and others, the OVO-system,<sup>7</sup> Wageningen UR,<sup>8</sup> and the high technology of greenhouses. There is a mainstream opinion that according to the present miracle appearance and figures of the Netherlands's agriculture, South Korea's agriculture must try to imitate and benchmark the advanced model of Dutch agriculture as soon as possible and that efforts to meet these benchmarks will revitalize the stagnant agriculture economy of South Korea over the long run.

However, agricultural development has evolved through a long process of responding to natural and historical conditions, so considering this is essential for determining whether

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<sup>7</sup> Piet Rijk and Ernst Bos defined "OVO (Onderzoek, Voorlichting, Onderwijs) as Research, Information services and Education. It is based on good collaboration between research, information and education in the agriculture and horticulture sector." See: Piet Rijk and Ernst Bos, Dutch agriculture and horticulture with a glance at South Korea : Policies and results in the past, present and future (The Hague, LEI Wageningen UR, April 2009), 38.

<sup>8</sup> Ibid., p.88.

"Since 1998 the Wageningen University and the Scientific Research Institutes and the Experimental Stations work together on the field of knowledge. A common name is chosen: Wageningen University and Research Centre (Wageningen UR)."

we have clearly understood the background of development rather than be fascinated with its current state. Within this understanding, some developed countries' agriculture can be the latest model for us. Accordingly, it is impossible for our agriculture to follow every policy and strategy of Dutch's agriculture because there are radical differences between both countries in terms of the historical origins of agricultural development, natural conditions such as climate, location and soil, the structure of agriculture, and so on.

This thesis will strongly concentrate on the different roots of the Netherlands's and South Korea's agriculture development. Contrary to Dutch farmers who have sought free trade since the nation's founding in spite of several colonial rules, South Korea's agriculture has been mired in dirigisme, or a system of state-led development since the Korean War. This study investigates the underlying reasons why our government bureaucrats chose this policy direction. Moreover, in clarifying the limits of policies, the analysis critically assesses the influential 1970s rural development model in South Korea, the *Saemaul Movement*, which emphasized on the instauration of the rural economy.

To be sure, the early differences in policy direction between the two countries produced apparently contradictory results in the structure and outcome of their agriculture industries. Consequently, whereas some nations are the agriculture powers of the world, others continue to suffer from a chronic trade deficit. The comparative study between two countries' development of agriculture during the stage of modernization will sensitize us to the broader context in the limitations and challenges of our agriculture policies. These in turn have important implications for establishing an agricultural policy vision and agenda for South Korea. Consequently, I hope this thesis will prove useful for extracting clues of how to rescue our agriculture industry from darkness.

## **II. BRIEF COMPARISON BETWEEN SOUTH KOREA AND THE NETHERLANDS**

### **Natural Situations Causing Differences in Production Structure**

Prior to examining the specific differences between two countries' agriculture structure, refer to Table 1, which provides an overview of the natural differences in the current situation of the two countries. Both are small countries compared with the rest of world. The Netherlands is 135th in the world's total area and 64th in the world's total population. South Korea is 109th in the world's total area and 26th in the world's total population.<sup>9</sup>

However, the Netherlands is not a small country. Although South Korea's total land area and population is three times larger, arable land area per agricultural population in the Netherlands is 14 times more than South Korea. The fact is the Dutch have larger arable land than South Korea. Compared to the Netherlands's total land area and population, South Korea is three times larger than the Netherlands. Therefore, it can be arithmetically calculated that both countries have the same level of population density in their own land area. However, whereas the agricultural land in both countries is about the same, the proportion of agriculture land areas in total surface areas makes for huge differences. In the Netherlands, 56.9 per cent of the nation's total land area is used for agriculture contrary to South Korea's 18.5 per cent. This is because although the Netherlands has no mountains except for a few hills, the maximum height is 323m above sea level.<sup>10</sup>

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<sup>9</sup> "World Fact Book 2013," US CIA, accessed December 11, 2013, <https://www.cia.gov/library/publications/the-world-factbook/geos/ks.html>.

<sup>10</sup> Haifa Feng, Agricultural development in the Netherlands: An analysis of the history of Dutch agricultural development and its importance for China, 20.

Table 1. Natural Differences Between the Netherlands and South Korea

	<i>The Netherlands (A)</i>	<i>South Korea (B)</i>	<i>Ratio (A/B)</i>
Total area, 2009, 1,000 ha	4,154	9,990	41.6 per cent
Land area, 2009, 1,000 ha	3,373	9,710	34.7 per cent
Arable land area, 2009, 1,000 ha	1,918(a)	1,796	106.8 per cent
<b><i>Per cent agriculture land of total surface land</i></b>	<b><i>56.9 per cent</i></b>	<b><i>18.5 per cent</i></b>	<b><i>30.7 per cent</i></b>
Total population, 2011, X 1,000	16,613	49,410	33.6 per cent
Agricultural population, 2011, X 1,000	397	2,926	13.6 per cent
Economically active population in agricultural, 2011, X 1,000	208	2,726	7.6 per cent
<b><i>Arable land per worker in agriculture</i></b>	<b><i>9.22</i></b>	<b><i>0.66</i></b>	<b><i>140 per cent</i></b>
Climate	Marin west coast	Temperate monsoon	-
Maximum Temperature(°C), Debilt & Seoul(b),	16.8	25.2	-
Minimum Temperature(°C), Debilt & Seoul,	2.2	-3.3	-
Maximum Precipitation (mm), Debilt & Seoul,	81.1	367.6	-
Minimum Precipitation (mm), Debilt & Seoul,	47.6	21.1	-

Source: US CIA, World Fact Book 2013 and Statistics Korea, 2012 International Statistic Yearbook.

(a) Statistics Netherlands, statistical yearbook of the Netherlands 2011.

(b) Max./Min. temperature & precipitation was recorded during the period, 1961~1990.

Conversely, about 70 per cent of Korea's total land area is mountainous. In addition, 9.22 ha cultivated areas per agricultural worker in the Netherlands is greater than 0.66 ha in South Korea. In other words, whereas the population in the Netherlands is one-third of South Korea, the absolute scale of arable land in the Netherlands is 6.8 per cent greater. Also, it indicates that arable land per economically active agricultural population in the Netherlands

is 14 times greater than that of South Korea. Therefore, the Netherlands is not a small country in terms of land utility and has more abundant land resources than South Korea does.

Next, there is a difference in the effects of climate. In the Netherlands, the marine west coast has mild summers and winters, which results in smaller annual temperature and precipitation range changes. “Not only is the marine west coast noted for its mild temperatures, but also for its heavy cloud cover and high humidity through much of year.”<sup>11</sup> Such characteristics of the Netherlands’s climate are not proper to cultivate food crops because summer temperatures do not rise enough to fully ripen grains. On the other hand, the mild temperature and even rainfall throughout the year are beneficial for herbal plants. As a result, the mixed agriculture of herbal plants and livestock has been predominantly developed. The Netherlands has specialized in the horticultural (vegetable and flowers) industry, accounting for nearly 40 per cent of total production, and is the major exporter of flowers. Next in order of importance is dairy farming (22 per cent), pigs and poultry (16 per cent) and arable farming (14 per cent). The share of farm houses exceeding a gross margin (output minus variable costs) of 137,500 Euros (a price level of 2000) is 48 per cent in horticulture, 39 per cent in dairy farming, 31 per cent in pigs and poultry and 15 per cent in arable farming.<sup>12</sup>

South Korea, including Eastern Asia (China and Japan) is under a temperate monsoon climate. Climatically, because it tends to be cold and dry in the winter as well as hot and rainy in the summer, arable farming is dominant (61.7 per cent of total agricultural production in 2012). Regarding the production structure of each sub-sector in South Korea, major arable production is dominated by food crops (rice and barley), vegetables, and fruit with about an 85 per cent share of total arable production. These three dominating arable production

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<sup>11</sup> “Marine (Humid) West Coast Climate,” *The Physical Environment*, accessed December 15, 2013, [http://www4.uwsp.edu/geo/faculty/ritter/geog101/textbook/climate\\_systems/marine\\_west\\_coast.html](http://www4.uwsp.edu/geo/faculty/ritter/geog101/textbook/climate_systems/marine_west_coast.html).

<sup>12</sup> Krijn J. Poppe, *Economic assessment of Dutch agricultural research*, (The Hague: LEI Wageningen UR, August 2008), 11.

categories, i.e. food crops (rice and barley), vegetables, and fruit, contribute to more than 52.4 per cent of the gross value of agricultural production.<sup>13</sup>

In sum, different climates have triggered different agricultural production structures between both countries. Whereas the Dutch have specialized in livestock and dairy farming making various processed products, South Korea intensively focuses on edible plants that are not high value-added, as previously mentioned. Therefore, with its specialization in rice-raising in South Korea, it is impossible to apply the Netherlands's agriculture model of making a profit from value-added products such as butter, cheese, fermented products and flowers.

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<sup>13</sup> Ministry of Agriculture, Food and Rural Affairs, *Key Statistics for Food, Agriculture, Forestry and Fisheries in 2012* (Sejong : Ministry of Agriculture, Food and Rural Affairs, 2012), 80-86.

## Agriculture's Contribution to the National Economy

Although the primary role of the agricultural sector has been reduced in most of the world in the course of economic progress, the economic importance of agriculture in the Netherlands is totally different. The Netherlands's economic activities related to agriculture are significantly important.

*Table 2. Gross Value Added and Employment of the Dutch Agricultural Complex*

	<i>Gross value added(EUR billion)</i>			<i>Employment(1,000)</i>		
	<i>1995</i>	<i>2006</i>	<i>2010</i>	<i>1995</i>	<i>2006</i>	<i>2010</i>
Agricultural complex(a)	32.	43.9	52.5	659	654	689
Share in national total (per cent)	12.0	9.8	10.2	11.6	10.1	10.2
Gardening, agricultural services and forestry	1.0	3.9	3.8	39	63	51
Foreign agricultural raw materials:	11.1	15.5	15.6	190	196	259
Processing industry	5.7	6.7	6.6	75	63	66
Supply	2.3	4.4	4.0	50	64	73
Distribution	3.1	4.8	4.7	65	69	120
Agricultural complex(based on domestic agricultural raw materials)	20.2	24.5	21.5	430	396	379
Share in national total (per cent)	7.5	5.0	5.4	7.6	6.1	5.6
Agricultural and horticulture	8.4	8.1	7.6	189	170	151
Processing industry	3.0	3.8	3.2	54	45	39
Input manufacturing	6.5	9.6	8.1	135	132	132
Distribution	2.3	3.0	2.6	53	46	56

Source: Agricultural economic report 2005-2012 of the Netherlands(The Hague: LEI).

(a) based on domestic and foreign agricultural raw materials  
(including gardening, agricultural services, forestry, cocoa, alcohol and tobacco).



From 1995 to 2010, the entirety of economic activities associated with the agricultural complex (i.e. agriculture, horticulture, and associated products and services), corresponded to 10 per cent of the total national added value and employment. The share of the domestic agricultural complex in the nation's total is over half of the total agricultural complex. The remainder relates to the supply, distribution, and processing of international raw materials, which means substantial portions of the operations in the agricultural complex are related to exports by raw materials imported from overseas (see Table 2).<sup>14</sup>

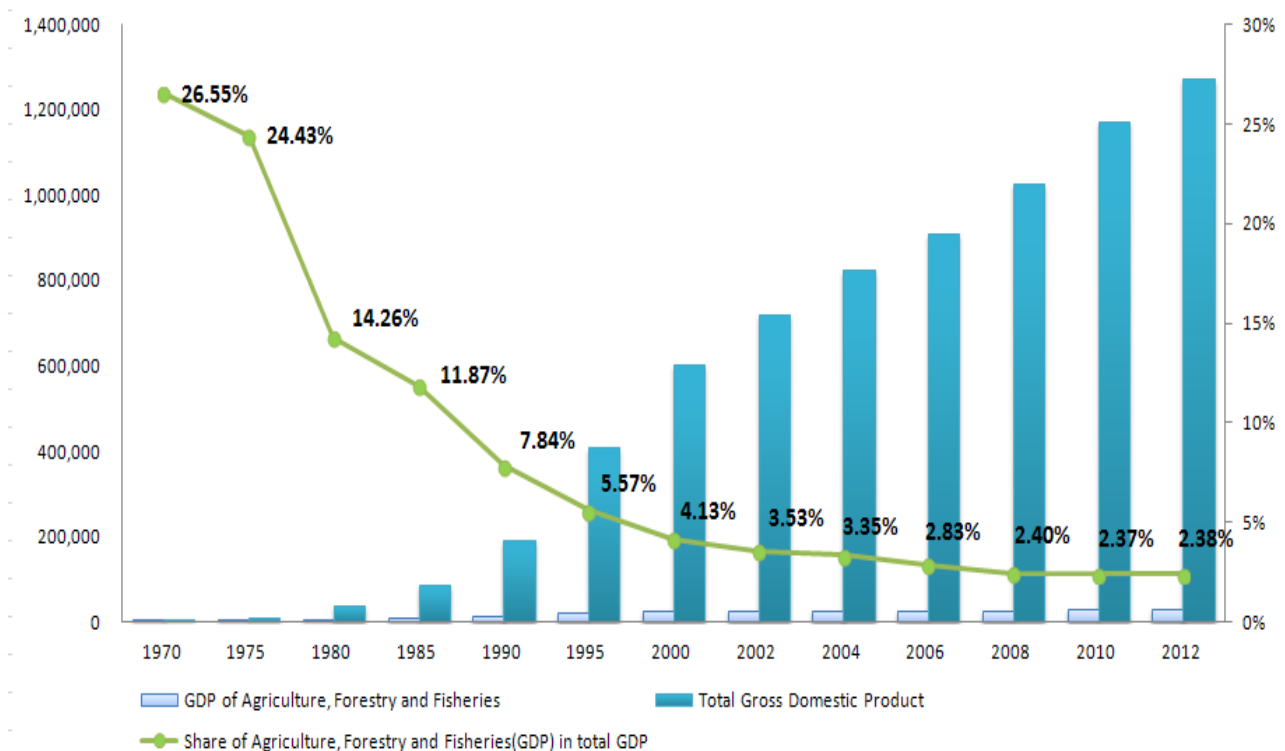


Figure 2. Shares of Agriculture GDP in National Total GDP of South Korea (per cent, billion)

Source: The Bank of Korea.

MAFRA, Key Statistics for Food, Agriculture, Forestry and Fisheries 2012.

<sup>14</sup> P. Berkhout, H. Silvis and I. Terluin, eds., *Agricultural Economic Report 2013 of the Netherlands: Summary* (The Hague: LEI Wageningen UR, August 2013), 3-4.

In South Korea, agriculture held the most important position in economic growth before the introduction of economic development plans. Since the 1960s, rapid modernization and industrialization caused an absolute decline in the rural population and the unbalanced phenomena of the spatial disparity between urban and rural areas and the sectoral disparity between traditional and modern industries. The farmhouse population significantly declined from 14.6 million people in 1960 to 3.1 million people in 2010 (from 58.2 per cent to 6.3 per cent in terms of the proportion of total population). As shown in Figure 2, agriculture's share of the total GDP rapidly declined till the middle of the 1990s with eloquent stagnation thereafter.

### **III. THE STRUCTURE OF THE AGRICULTURAL INDUSTRY**

#### **Great Imports Make the Netherlands the Second Largest Exporter in the World**

The Netherlands has an export-oriented economy and the agricultural sector is no different. The Dutch have overcome the limitation of their natural resources by converting non-tradable production factors into tradable ones. The history of colonization includes the Dutch East India Company (Dutch: Vereenigde Oost-Indische Compagnie, VOC) established in 1602, which expanded Holland's narrow territory towards the globe and enabled the Dutch to take in a wide range of resources.

Traditionally, the theory of economic growth has been typically expressed by the aggregate production function, which means how much output is produced from given amounts of input factors. Inputs of land, labor, and capital are the major contributors for large outputs. In Dutch agriculture, the input factors of land and labor are limited. The Dutch have overcome a scarcity of natural resources by 'absolutely free trade,' which today means that knowledge, technology, and creativity combined with capital and labor have played the most important role in the Netherlands's growth of agriculture. Only the U.S. exported more in 2007 than the Netherlands. In 2007, the U.S. shows exports of 78.7 billion EUR, with the Netherlands at 54.7 billion EUR. Germany is third, at 50 billion EUR in agricultural exports (see Table 3).<sup>15</sup> This miracle performance of the Netherlands was achieved from "big imports and big exports, that is, to realise bigger exports through big imports."<sup>16</sup>

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<sup>15</sup> Ministry of Agriculture, Nature and Food Quality, *Facts and Figures 2010: The Dutch Agricluster in a global context* (The Hague: Ministry of Agriculture, Nature and Food Quality, June 2010), 41.

<sup>16</sup> Li Weimin, *Dutch agriculture through the eyes of a Chinese economist* (The Hague: LEI Wageningen UR, 2009), 15.

Table 3. Global Exports of Agricultural Products (in billions of EUR)

	2000	2007
United States	49.3	78.7
The Netherlands	24.8	54.7
Germany	19.9	50.0
France	27.7	49.6
Brazil	10.4	35.2
Canada	20.9	31.3
Belgium	14.0	29.8
China	12.4	28.9
Spain	12.3	27.4
Italy	12.2	25.8

Source: Facts and Figures 2010 (The Hague: Ministry of Agriculture, Nature and Food Quality, June 2010), 41.

The majority of agricultural product exports in the Netherlands are not associated with their own agricultural production. A significant portion of Dutch agricultural exports has surpassed their own agricultural production and has been largely dependent on imported agricultural products. The Dutch import diverse raw materials not only for food consumption. The majority of imported agricultural products exceeding domestic demands were consumed in feeds for raising livestock and original materials for processed food products. “After diversified raw materials are processed many times in the Netherlands (poultry and livestock raising can be treated as the first processing for crop products), their added value increases by a large margin, bringing the Netherlands massive wealth.”<sup>17</sup>

Both South Korea and the Netherlands have an export-intensive industrial structure. Table 4 shows that both nations’ volume of import and export trade is similar in size. In 2010, the Netherlands’s exports totaled 492,645 million dollars while imports reached 439,987

<sup>17</sup> Li Weimin, Dutch agriculture through the eyes of a Chinese economist, 129.

million dollars, registering a trade surplus of 52,658 million dollars (12 per cent trade balance ratio). South Korea had a trade surplus of 41,172 million dollars (9.7 per cent trade balance ratio) through 466,384 exports and 425,212 imports in million dollars.

However, with regard to the agrifood industry, the difference between the two countries is evident. In 2010, the Netherlands had only 1.2 times the volume of South Korea's agrifood imports, but its volume of agrifood exports was eight times higher than that of South Korea. These led to a trade surplus of 29,413 million dollars in agriculture and the most important position in the overall national economy, accounting for as much as 55.9 per cent of the total national trade surplus. On the one hand, the agricultural sector in South Korea in 2010 recorded a total trade deficit of 38,221 million dollars and has been running chronic deficits each year. Then the reason that the Dutch agricultural sector achieves a significant trade surplus can be explained by reviewing the specific figures shown in Table 4. Agricultural output in the Netherlands in 2008 is 34,600 million dollars compared to exports of 86,651 million dollars in 2010, exceeding by 2.5 times the agricultural output value. Aside from an agricultural output value, where did the remaining export volumes come from? How can the Dutch export so much without having much more agricultural output than South Korea, producing 36,071 million dollars in 2010?

The reason is that the Dutch are big exporters as well as big importers in the agriculture sector. In 2010, the importation value of agricultural production accounted for 57,238 million dollars and 66.1 per cent of total agricultural exports. The remaining 52,051 million dollars of agrifood exports, except for the agricultural output value of 34,600 million dollars, all results from imports. Ultimately, while the Netherlands has more than 6.8 per cent of arable land in South Korea and a similar level of production value to South Korea, the Dutch imports are equivalent to 1.2 times more and exports are equivalent to 8 times more in agricultural production compared with South Korea.

Table 4. Comparisons of Open Trade Between Netherlands and South Korea in 2010 (in million US dollars)

	<i>The Netherlands</i>	<i>South Korea</i>	<i>Ratio</i>
Exports	492,645	466,384	
Imports	439,987	425,212	
Total trade balance	52,658	41,172	
<i>per cent of total trade balance</i>	<i>12 per cent</i>	<i>9.7 per cent</i>	
Agriculture-related exports	86,651	10,613	8 times
Agriculture-related imports	57,238	48,834	1.2 times
<i>per cent of Agriculture-related imports over exports</i>	<i>66.1 per cent</i>	<i>460.1 per cent</i>	
Agriculture-related trade balance	29,413	(-)38,221	
<i>per cent of Agriculture-related trade balance</i>	<i>51.4 per cent</i>	<i>(-) 78.3 per cent</i>	
<i>per cent of Agriculture-related trade balance in total trade balance</i>	<i>55.9 per cent</i>	<i>(-) 92.8 per cent</i>	
Production of agriculture-related	34,600(a)	36,071(b)	
<i>per cent of Agriculture-related import in agri-production</i>	<i>65.4 per cent</i>	<i>35.4 per cent</i>	
<i>per cent of Agriculture-related export in agri- production</i>	<i>150.4 per cent</i>	<i>(-) 70.6 per cent</i>	
Total population, in thousand persons	16,613	49,410	
<i>Agriculture-related import per capita</i>	<i>3.4</i>	<i>1.0</i>	3.4 times
<i>Agriculture-related export per capita</i>	<i>5.2</i>	<i>0.2</i>	23 times
<i>Agriculture-related trade balance per capita</i>	<i>1.8</i>	<i>(-) 0.8</i>	

Source: 2012 International Statistic Yearbook. Deajeon: Statistics Korea, 2012.

(a) Agriculture-related production in the Netherlands in 2008, quoted in Young-gon Go and Jung-hwan Lee, *The proper understanding of Dutch agriculture(1)*, Vol 101 (Seoul: GS&J institute, 2010), 3.

(b) Agriculture-related production in South Korea in 2010, quoted in Do-hwan Chang, Sang-hyeon Chae and others, *Korean Agriculture in the World from Statistics* (Seoul: Korean Rural Economic institute, 2012), 33.

In addition, the Dutch agriculture-related import and export per capita are 3.4 times greater and 23 times greater than that of South Korea respectively. In short, the majority of the Netherlands's exportation of agriculture is dependent on 'intermediate trade,' or direct re-exporting much of the imported goods and 'processing trade,' importing cheap raw materials and re-exporting value added products. For instance, from 1997 to 1999, despite of large domestic milk production (averaged 11,287,000 t), the Dutch had imported averaged 663,000 t milk. The Netherlands imported milk at 329 dollars per ton, and re-exported processed milk at 786 dollars per ton.<sup>18</sup>

In conclusion, a significant portion of Dutch agricultural exports consists of 'intermediate and processing trade,' importing cheap raw materials for resale purposes. After repackaging and guaranteeing quality, the Dutch resell finished goods at a high price utilizing the world-wide sales network they have built. Half of the Netherlands's agricultural export products are processed foods and luxury goods. This trade is the consequence of strong brand power in the food industry enough to re-export the goods at a high price and global distribution networks founded from the 1600's, such as the Dutch East India Company (Dutch: Vereenigde Oost-Indische Compagnie, V.O.C) through hundreds of years of history.<sup>19</sup>

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<sup>18</sup> Li Weimin, Dutch agriculture through the eyes of a Chinese economist, 139-140.

<sup>19</sup> Young-gon Go and Jung-hwan Lee, *The proper understanding of Dutch agriculture(1)*, Vol 101 (Seoul: GS&J institute, 2010), 7.

## **Family-Managed and Specialized Conglomerates by Ownership**

According to the dominant arguments of government policy makers and mainstream academics, through the structural characteristics of the petty farmers based on family labour, it is unlikely for South Korea's agriculture to survive much longer in a severe market economy based on the principles of free competition. The alternative methods are simply farm scale improvement and commercialization in order to modernize agriculture and increase the international competitiveness of South Korea's agricultural products.

However, despite numerous efforts to actualize economies of scale, our current approach to agriculture has still not deviated from its nature of small scale farmers. As shown Table 5, areas of agricultural land have decreased continuously with the conversion of farmland areas into non-farming purposes such as industrial land areas and road allowances. Also, not only is there insufficient agricultural land, but the number of farmhouses has also continued to drop. Eventually, the degree of an increase in arable land per farmhouse has remained at a minimal level since 1995. In short, the fact that average arable land area per farm in 2011 is 1.46 ha clearly shows the state of micro-farmers in South Korea.

Figure 3 shows the distribution changes of farm size since 1990. In the situation of a gradual decrease in agricultural land areas, the majority of the farm land composition has occupied less than 1.5 ha. Whereas there is no significant change in the number of large-scale farmers with more than 3.0 ha since the 2000s, farmers who own 1.5-3.0 ha have gradually reduced and farms with less than 1.5 ha have shown the tendency to decline sharply. This reduction in the overall agricultural land areas mostly represents small farmers owing less than 1.5 ha land, but the growth of scaled agricultural land areas for maximizing the productivity has been weak.



Table 5. Changes in Agricultural Population, Land, and Farmhouse in South Korea

Year	Total surface (1,000ha)	Arable land		Arable land(a) per farmhouse (1,000unit)	Land productivity (won/10a)
		(1,000ha)	(per cent)		
1975	9,848	2,240	22.7	94.2	-
1980	9,899	2,196	22.2	101.9	-
1985	9,912	2,144	21.6	111.3	-
1990	9,926	2,109	21.2	119.4	624,893
1995	9,927	1,985	20.0	132.2	954,171
2000	9,946	1,889	19.0	136.5	1,050,677
2002	9,959	1,863	18.7	145.5	1,067,586
2004	9,962	1,836	18.4	148.1	1,138,024
2006	9,968	1,800	18.1	144.6	1,160,585
2008	9,983	1,759	17.6	145.1	1,178,495
2011	10,015	1,698	17.0	146.0	1,229,000

Source: MAFRA, South Korea, Key Statistics for Food, Agriculture, Forestry and Fisheries 2012.

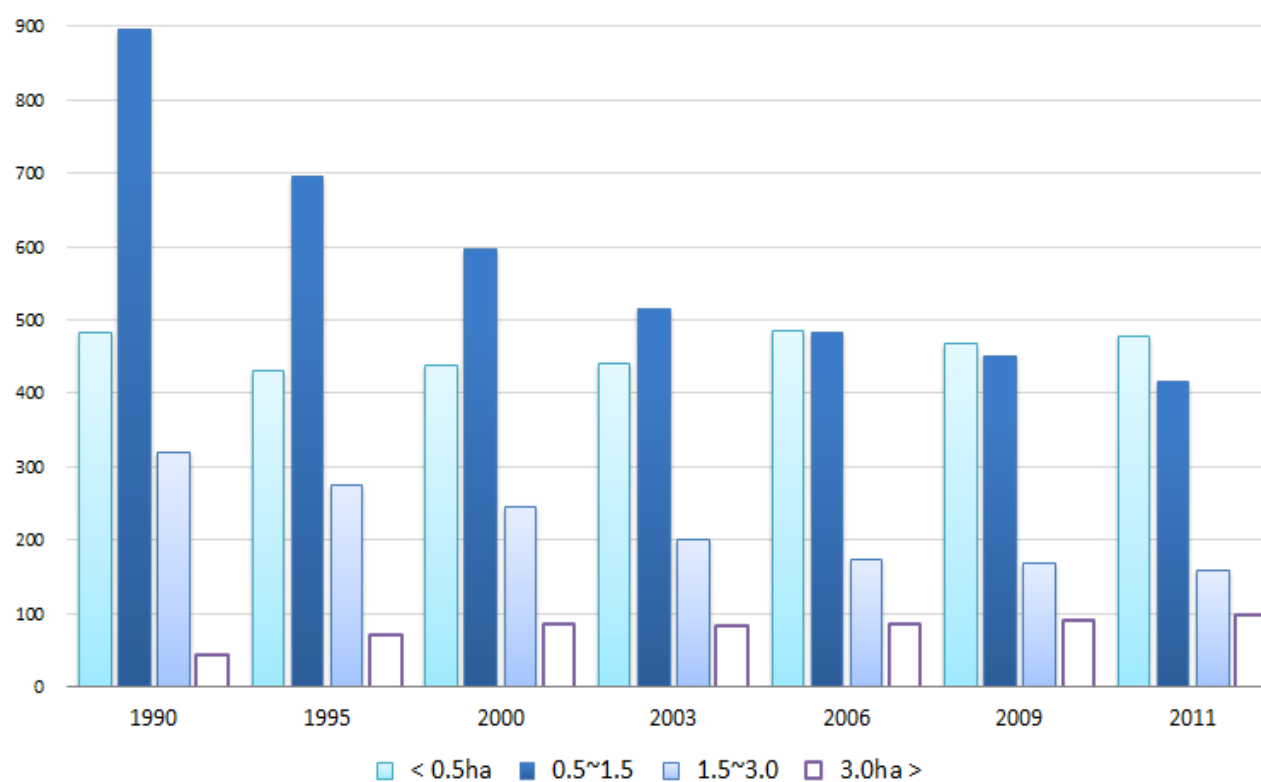


Figure 3. Changes in Agricultural Land in South Korea by Size (1,000 units)

Source: MAFRA, South Korea, Key Statistics for Food, Agriculture, Forestry and Fisheries 2012.

The tendency to shift from household farming to commercial farming for maximizing the effect of the economics of scale and land productivity is the typical case of advanced countries in an agriculture economy. Nevertheless, South Korea has still maintained the structure of petty farming. The indicator of land productivity, or 'agricultural value-added / arable land' has stagnated since the 2000s (Table 5).

There are mainstream opinions suggesting that it is needed to politically foster commercialized farming and independent farmers by reducing the dependency on the uneconomical rice crop. And the Dutch agriculture model has been chosen as an alternative to the way of South Korean agriculture. Although Dutch agriculture attained its high level of competitiveness while enterprises entered into an agriculture industry, more than 95 per cent of farming is solely based on the family-oriented composition. In short, Dutch agriculture is not significantly different from South Korea's family farming structure. Therefore, it is incorrect that the Dutch became a huge agriculture exporter and boosted competitiveness by large-scale enterprises in agriculture. About 68 per cent of regular workers (FTEs) in 2010 in the Netherlands are family workers (Table 6).

*Table 6. Workers in Agriculture and Horticulture in the Netherlands (×1,000)*

	<i>2000</i>	<i>2005</i>	<i>2009</i>	<i>2010</i>
Labour volume(FTE <sup>20</sup> )	2012	175	171	170
Regular workers	197	160	146	141
Family workers	139	111	97	95
Not family numbers	58	48	49	47
Casual workers	15	16	25	28

Source: CBS, Statistical Yearbook. 2010-2012.

<sup>20</sup> WIKIPEDIA, s.v. "Full-time equivalent (FTE)," last modified December 11, 2013, [http://en.wikipedia.org/wiki/Full-time\\_equivalent](http://en.wikipedia.org/wiki/Full-time_equivalent).

"Full-time equivalent (FTE) is a unit that indicates the workload of an employed person (or student) in a way that makes workloads comparable across various contexts. FTE is often used to measure a worker's involvement in a project, or to track cost reductions in an organization. An FTE of 1.0 means that the person is equivalent to a full-time worker, while an FTE of 0.5 signals that the worker is only half-time."

Also, the Netherlands has a ‘Landed Farmer System,’ the same as South Korea. The majority of Dutch agriculture is based on private ownership and land leasing accounts for a relatively small proportion. From 1970 to 2005, whereas the number of holdings with more than 50 per cent of land ownership had gradually increased, the number of farms with less than 50 per cent of land ownership declined and finally recorded 9.3 per cent in 2005 (Table 7).

*Table 7. Agrarian Holdings in the Netherlands by Ownership (per cent)*

	<i>1970</i>	<i>1977</i>	<i>1978</i>	<i>1997</i>	<i>2005</i>
Full ownership	38.1	43.2	47.4	53.8	41.1
80~99 per cent ownership	8.8	9.4	11.2	13.8	11.4
50~79 per cent ownership	14.1	14.7	15.0	12.9	18.8
20~49 per cent ownership	10.4	10.5	9.9	8.0	12.3
< 20 per cent ownership	6.0	5.8	5.3	4.0	7.1
Leased land only	22.6	16.4	11.2	7.5	9.3

Source: *Dutch agriculture through the eyes of a Chinese economist* (The Hague: LEI, 2008): 43.

In appearance, the structure is family farming by private ownership, but if you look on the inside of the Netherlands, you can see noticeable differences between it and South Korea. The Dutch government has followed a ‘market choice approach’ in favor of competition and efficiency, which has freed them in the market and allowed them to achieve specialization and farm size increase. “The mature system of market economy in the Netherlands guarantees the farmers’ decision-making rights for their production activities and their control over resources, by [these] farmers are encouraged to get the maximum return from their farm operation.”<sup>21</sup> As the Dutch government authorized farmers’ democratic decision making for farming activities such as farm size, structure of possession, and production, Dutch farmers, in a survival-or-bankruptcy situation, are essentially conglomerates based on family-type

<sup>21</sup> Li Weimin, *Dutch agriculture through the eyes of a Chinese economist*, 43.

ownership. The formation of cooperatives is more efficient for obtaining market information, technical improvement, and financial support as well as strengthening the right to speak as political and social status. Also, family farms are more beneficial for lowering cost on supervision and for quickening the decision-making process. If a farm owner hired workers from outside, there could be some difficulties such as wasted labour on supervision, lack of a sense of community and inflexible responses to changing market conditions. In terms of accountability, diligence, and sense of community, family farms are more advantageous and efficient to operate.

Also, the Dutch have intensively specialized in the specific production of dairy, pigs and poultry, flowers and vegetables. In the case of potatoes, farmers focus on one or two products of the most competitive varieties among seed potatoes, edible potatoes, and starch potatoes. In another case, floriculture farmhouses select only one among several options: cut-flowers in glasshouse or the bare ground, flower bulbs, seedlings, and pot seedlings as well as some kinds of flowers.

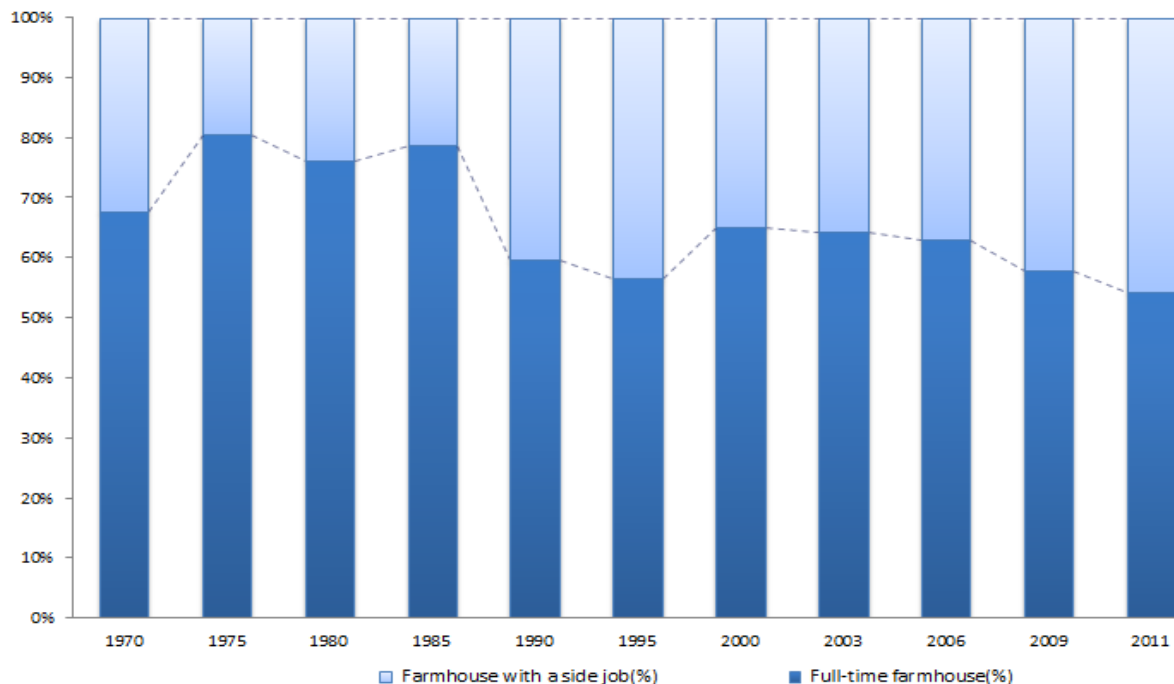


Figure 4. Shares of Side Work and Full-Time Farmers in South Korea (per cent)

Source: Statistics Korea, farm household economy survey

Conversely, in South Korea as shown in Figure 4, the proportion of farms as a side job has increased gradually since the 1970s. The ratio of farmers for side-work versus those for full-time in 2011 was 54.2 per cent: 45.8 per cent. This explicitly explains that the specialization of farms has seen very little progress in recent years. In other words, the agricultural labour forces have not committed to, but have sporadically tried out a few competitive agricultural varieties. Consequently, this phenomenon has led to a failure in the maximization of labour productivity.

Through the progress of competition to determine survival or drop in the open market, a number of Dutch small farmers were gradually reduced and only few competitive farmers grew to corporate-family farms specializing in on one or two products.

... the small farms gradually grew to small commodity producers and further developed to specialized commodity producers. Finally, they have grown into large, profit-pursuing modern farms, often forming an agro-complex or agribusiness with other partner enterprises. It is this agro-complex made up by many strong family farms that forms a base for the competitiveness of the Dutch agriculture in the world.<sup>22</sup>

By analyzing the Dutch farm size in detail between 2000 and 2011, Figure 5 shows a number of farmhouses of less than 50 ha have decreased markedly, whereas farms of more than 50 ha have constantly increased. Although reduced by half the number of glasshouse farmhouses from 8,000 units in 1975 to 4,000 units in 2007, most capital-intensive conservatory farmhouses of 1 ha or more increased more than three times and those of 2 ha or more increased more than eleven times.<sup>23</sup> In the livestock sector, despite the drop in the number of dairy farmers by one-quarter from 1975 through 2007, the farmhouses raising over

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<sup>22</sup> Li Weimin, Dutch agriculture through the eyes of a Chinese economist, 44.

<sup>23</sup> Young-gon Go and Jung-hwan Lee, *The proper understanding of Dutch agriculture(2)*, Vol 101 (Seoul: GS&J institute, 2010), 8.

a hundred cows increased by five times.<sup>24</sup> Contrary to South Korea's small-scale farms based on subsistence agriculture for self-sufficiency and livelihood, the Dutch, in free-market systems, early on had the appearance of huge farming conglomerates according to the law of survival by applying equitably risks and opportunities.

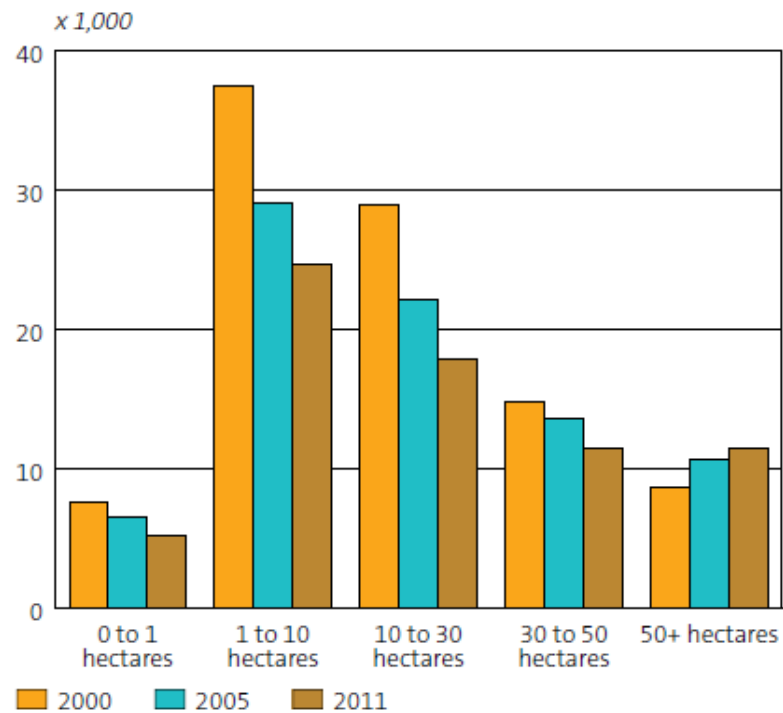


Figure 5. Dutch Farm Sizes

Source: CBS, Statistical Yearbook, 2010-2012.

<sup>24</sup> Young-gon Go and Jung-hwan Lee, *The proper understanding of Dutch agriculture(2)*, 8.

## The Contrastive Purpose of Huge Government Subsidies

As a result of an opening of the agricultural market rather than protectionism, there is a commonsense standpoint that the Dutch could increase competitiveness with fewer government subsidies. On the contrary, a large amount of farm subsidies from South Korea's government concentrated directly on an income compensation and price support policy. This has become the focus of public censure because, as many believe, government subsidies have impeded agricultural competitiveness.

However, total aids to Dutch farmhouses are much larger than in South Korea. This stems from the fact that all EU members have been funded by the EU Common Agricultural Policy (CAP) and each individual member state. As shown in Table 8, the ratio of EU countries' agricultural subsidies compared to total agricultural outputs was 18.3 per cent in 2011. Fixed payments based on area planted and animal numbers accounted for 57.8 per cent among total agricultural subsidies in the same year. These indicators are much higher than South Korea's total grants in aids to agriculture per total gross agricultural outputs in 2011, 5.5 per cent. These large-scale agricultural subsidies in OECD countries, including the United States and Japan are a common phenomenon.

Table 8. International Comparisons of Agricultural Subsidies in 2011 (in million US dollars)

	<i>Gross agricultural output (A)</i>	<i>Farm subsidies(B)</i>	<i>B/A (per cent)</i>	<i>Fixed payments(C)</i>	<i>C/B (per cent)</i>
EU	497,628	91,057	18.3	52,660	57.8
OECD	357,632	148,620	41.6	65,069	43.8
United States	372,261	27,040	7.3	5,798	21.4
Japan	103,621	14,718	14.2	4,596	31.2
South Korea	39,582	2,166	5.5	594	27.4

Source: OECD Database, Producer and Consumer Support Estimate, quoted in *Korean agriculture in the world from statistics*, (Seoul: Korean Rural Economic institute, 2012), 33.

Specifically, when looking at the farm payments of the Netherlands, “farms and horticultural holdings received farm payments totalling an average of more than 14,000 Euros in 2007. About one in four holdings did not receive payments.”<sup>25</sup> In short, the Netherlands has as much support as South Korea. But, there are some differences in content. Common Agricultural Policy (CAP), which is responsible for a significant portion of agricultural aids, has supported “for environmentally-friendly farms, cattle farms in economically or environmentally vulnerable regions, farms in land consolidation projects or other development projects, quality improvements in and the marketing of agricultural products, improving animal welfare, agricultural environmental measures and risk insurance”<sup>26</sup> rather than income supports by direct farm payments.

In conclusion, our agricultural policy should have attempted to dispel the misconceptions of the excessive and inefficient investment in the agriculture sectors. At the same time, it is essential to gain a national consensus regarding the necessity and justification of huge agricultural investments for future international competition.

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<sup>25</sup> P. Berkhout, and C. van Bruchem, eds., *Agricultural Economic Report 2009 of the Netherlands: Summary* (The Hague: LEI Wageningen UR, August 2008), 26.

<sup>26</sup> *Ibid.*, p. 5.



## **IV. THE COMPARATIVE ORIGINS OF THE AGRICULTURAL DEVELOPMENT POLICY**

To this point, I have grasped the current situation of both countries' agricultural industry and disclosed the most important differences in terms of natural conditions, trade structure, formation of farmhouses and government subsidies. However, for more deeply understanding the differences and learning a lesson from Dutch agriculture, there is another significant factor determining the success or failure of both countries' agriculture. In this chapter, I will analyze the progress of agricultural development in perspective of two countries' historical changes and economic development.

The first is the historical origin of free-trade principles in the Netherlands which made Dutch agriculture the second largest exporter in the world. I believe that every current situation has fundamental causes especially in history. For much of the century, Dutch farmers had not only accumulated agricultural knowledge and technology for enhancing labour productivity, but also built the spirit of free market principle.

The second is South Korea's inevitable choice in the process of agricultural development. After the Korean War and Japanese colonial rule, there were scarcities in all national resources: insufficient and devastated land, depletion of domestic capital and labour shortage. Therefore, South Korea's government had no way to lean on foreign aids and placed high priority on the high-growth industries such as heavy and chemical industry for rapid economic reconstruction. In the course of economic development, agriculture was necessarily sacrificed. The agricultural sector suffered from low food price policies to lower industrial wages for labour-intensive exports, which provided excellent labor forces in rural areas for the urban sector.

In examining the greatest disparity between South Korea and the Netherlands, I'm faced with the necessity of understanding the process of agricultural development by looking deeply into the history of economic growth. Consequently, this reveals why both countries walk a distinctly different way. Agriculture was a huge success in the Netherlands, but not in South Korea.

## The Open Market Policy of the Netherlands

The agriculture policy of the Netherlands embraces a market-based strategy. This market approach stems from the neoclassical economic theory.

This theory maintains that the market, driven by the self-interest of suppliers, is the most efficient mechanism ever devised. Government intervention in the market must therefore be minimized. Liberal theory suggests the idea of “gains from trade” based on comparative advantage.<sup>27</sup>

The Netherlands, known as the typical agricultural exporter in the world, was never led to a particular form of agricultural structure with any kind of regulations. Consequently, the policy choice that promoted competition and efficiency in accordance with ‘market choice’ was as much the work of the Netherlands government’s thorough pursuit of liberal economic ideas as anything. The Netherlands’s government, therefore, did not impose any sort of production or regulatory plan, but focused on promotion policies for environmental conservation, research, extension and education, budget assessments for supporting the agricultural industry and reconstruction plans.

The reason that the Dutch relied heavily on the open-market and free trade was due to the limitation of its natural endowment. The Netherlands has had unfavourable natural backgrounds. “Around 2000 years ago, the Roman historian Pliny visited the water-logged Netherlands and wrote: Twice a day, the ocean floods huge stretches of land. The people lead a hardscrabble existence and live in huts built on manmade hills.”<sup>28</sup>

Not only is the total surface area 41,543 km<sup>2</sup> equivalent to one-fifth of the total area of

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<sup>27</sup> Hun-Joo Park, “The Origins of Faulted Korean Statism,” *Asian Perspective* 27 (2003): 175.

<sup>28</sup> NL Agency in the division of the Ministry of Economic Affairs, *Here’s Holland 2013* (The Hague:NL Agency, 2013), 8.

the Korean Peninsula, but also below half of the total area of South Korea. The maximum length between South and North is 282 km and the maximum length between East and West is 176 km. To be sure, it takes approximately three hours by a car to pass through this country.<sup>29</sup> Besides, due to the fact that total population is 16,805,037 (July 2013 est.)<sup>30</sup> in a small land, the Netherlands is the second most densely populated county in the world and the most density in Europe with an average of 496 inhabitants per km<sup>2</sup> (October 2012).<sup>31</sup> The total population and the total surface of South Korea are approximately three times more than the Netherlands. With its narrow territory and high population density, the country has been under the constant threat of frequent storms and floods, from both the sea and rivers. “High spring tides were often the cause of dike breaks, extensive inundations, temporary and sometimes permanent loss of land. For example, about 150,000 ha of farmland were lost in the flood in 1953.”<sup>32</sup> Moreover, under the influence of the marine west coast climate, there is a clear sky without rain in the Netherlands only 25 days of the year like most European countries already experienced. Consequently, the shortage of sunshine is a bad influence on raising crops.

Although the Dutch agricultural production has faced unfavourable conditions, they had surpassed these disadvantageous positions by trade. Li Weimin points out that “the Dutch find another way: to build an intensive market economy, and conduct trade, innovation and development. Trade is of critical importance for breaking through the natural bottleneck and agricultural development.”<sup>33</sup>

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<sup>29</sup> Gyeong-cheol Joo, *The Netherlands: the land of tulip, the country where all freedom is imposed* (Seoul: Sanbooks, 2010), 24.

<sup>30</sup> “US CIA, World Fact Book 2013,” last modified December 11, 2013, <https://www.cia.gov/library/publications/the-world-factbook/geos/ks.html>.

<sup>31</sup> NL Agency in the division of the Ministry of Economic Affairs, *Here’s Holland 2013*, 20.

<sup>32</sup> Haifa Feng, *Agricultural development in the Netherlands: An analysis of the history of Dutch agricultural development and its importance for China*, 24.

<sup>33</sup> Li Weimin, *Dutch agriculture through the eyes of a Chinese economist*, 130.

Land is a typical non-tradable production factor... Trade helped the Netherlands reach resources everywhere in the world, and thus not limited by its narrow territory. The Dutch are smart to change land as a non-tradable goods into tradable ones and extend the range of useful resources from their own country to the globe, thereby eliminating the rigid limits of nature resources.<sup>34</sup>

Also, considering the history of the Netherlands, we can find chronological origins of the market-oriented agricultural development policies from the 16th century. In this thesis, I have selected influential historical events for agricultural development and analyze impacts before and after these events: (a) the 'Golden Age' in Dutch history in the 17th century; (b) an endeavor to stick to free-trade principles around 1850; and (c) protectionism in European countries after World War I-II and the Great Depression.

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<sup>34</sup> Li Weimin, *Dutch agriculture through the eyes of a Chinese economist*, 129.

## *The Golden Age of Broadening the Agriculture Market Territory*

Dutch agricultural development stemmed largely from their world trade primacy. The Netherlands has a history of colonization, whether they were ruled or ruling. Although the Dutch were ruled by the Romans, Spanish, and French until the sixteenth century, they achieved independence as 'the Republic of the United Netherlands' by the Peace of Westfalen in 1648.<sup>35</sup> And “in the 17th Century the Netherlands was the leading maritime nation in the world. This period is known as the 'Golden Century' or 'Golden Age' in Dutch history.”<sup>36</sup>

In the course of the oncoming 16th century a new era of demographic growth occurred. Cities like Antwerp and subsequently Amsterdam and others in the northern Netherlands developed into dominant centres in the international economic field of force, as the economy in the coastal provinces, Holland, Zeeland and Friesland in particular went through a period of extraordinary growth, especially after 1580.<sup>37</sup>

This flourishing period of the Netherlands was caused by ‘the Reformation’ in particular. The atmosphere of religious freedom in the Netherlands, at that time, was to embrace the superior workforce of neighboring countries including the Jews, Muslims, and Protestants, who escaped from the religious persecution of the Spanish. Immigrants reached 150,000 people, who brought academic, technology and capital, enlivening the Netherlands economy. Especially, a huge influx of Protestants according to the Calvinist Protestant work ethic ‘Wealth accumulated by legitimate ways is God's blessing,’ gave the Netherlands excellent human resources, whose diligence and creativity was outstanding. Accumulated

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<sup>35</sup> Young-jung Kim and Bung-ik Chang, *The history of the Netherland* (Seoul: Mirae-N CO. LTD., 1994), 101.

<sup>36</sup> Haifa Feng, *Agricultural development in the Netherlands: An analysis of the history of Dutch agricultural development and its importance for China*, 41.

<sup>37</sup> Jan Bieleman, *Five centuries of farming: A short history of Dutch agriculture 1500-2000*, *Manholt publication series – Volume 8* (The Netherlands: Wageningen Academic Publishers, 2010), 23.

knowledge and technology from outside was the significant fundamental for unprecedented growth in the 16th century.

Another interesting origin for the economic prosperity in the Netherlands was the fishery. Herring fishing, in particular, brought great wealth to the Netherlands. But, fish was easily spoiled, because at that time, there were no proper storage systems. Willem Beukelszoon invented the innovative 'fish preservation technique' to keep fish for a long time. The herring were eviscerated after they were caught and then cured in a barrel with one part of salt. The barrels of salt and pickled herrings could be sold further inland through rivers and canals, and exported to foreign countries through maritime transport. I think that in herring fishing, all the secrets of 'Golden Age' in Dutch history are implied. Through herring fishing, the Dutch designed a new seagoing vessel to carry maximum cargo at minimum cost and developed processing technology to create added value. Fishing in itself was important, but it was connected closely with the commercial development of marine resources, and became the basis of world trade primacy of the Netherlands.<sup>38</sup>

At that time, demand for grains, including wheat, was sharply increasing because of the emergence and growth of commercial cities and high population growth. As you can see, the land of the Netherlands is narrow and the fertility of its soil is weak. In order to develop agriculture in these places, intensive farming methods (mechanization, scale enlargement, and specialization) was inevitable.<sup>39</sup> There was no government interference such as any sort of development or regulatory plan other than incentive policies. For instance, the Dutch government granted farmers cultivating reclaimed land 'Polder' a tax-free benefit from five to 20 years. Therefore, the Netherlands could achieve much higher agricultural productivity than in other regions of Europe.

Population growth was not only the case of a Dutch, but 'national' situation. "As the

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<sup>38</sup> Gyeong-cheol Joo, *The Netherlands : the land of tulip, the country where all freedom is imposed*, 217.

<sup>39</sup> *Ibid.*, p. 219.

European population grew the demand for agricultural products increased, which meant more grain, more meat and more wool, was needed to feed and clothe all these new Europeans.”<sup>40</sup> Particularly, grain was very much in demand because of its variety of food function. Grain was a raw material for making bread as well as Beer, the National Drink in Europe. However, because the Netherlands’s environment was not suitable for farming food crops, the Dutch had a very high dependence on imports for grain and imported a sizable supply of wheat from other European agricultural countries including France.

Geographically, agriculture developed from coastal areas and concentrated on dairy farming. ...It forced the farmers in the coastal areas to buy foodstuffs such as bread rather than growing their own cereals. ...Because the coastal areas stopped growing cereals, insufficient supply from the inland areas obliged farmers in coastal areas to import them from other countries and pay for them with export revenues, butter and cheese being among the most important export products.<sup>41</sup>

During the Eighty Years' War, or Dutch War of Independence (1568–1648), traditional grain trade in the Netherlands naturally moved to Danzig in the Baltic Sea and Königsberg, where great landowners maximized crop yields and supplied a very low price of grain contrary to Western European countries, fluctuations of harvest and a price rise were prevalent due to political and social change. The center of grain trade of the Netherlands was Amsterdam as a function of its distribution center market in wheat and rye. At that time, the amount of wheat and rye imported from Baltic Sea and northern Germany was almost 120,000 tons, which was equivalent to the total amount of exports to Europe from the Baltic Sea. Amsterdam merchants maximized profits by regulation of supply and demand. They did

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<sup>40</sup> Abel, ‘Stufen der Ernährung’, 1981, pp. 33-39, quoted in Jan Bieleman, *op. cit.*, p. 36.

<sup>41</sup> Haifa Feng, Agricultural development in the Netherlands: An analysis of the history of Dutch agricultural development and its importance for China, 41-42.



not sell directly imported grain; instead, they stored it in a barn. And then, when the prices did go up, they sold it. And the Netherlands built a global export network, so that they exported grain to Spain, Portugal, and Italy as well as their domestic market.<sup>42</sup>

In conclusion, the Netherlands did not do anything to boost agricultural industries by government strong will. Agriculture had developed naturally in the course of the efforts of each economic subject for overcoming the several obstacles amidst changing historical and natural circumstances. Dutch world trade primacy becomes a precursor for Dutch agriculture to broaden its market territory.

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<sup>42</sup> Bung-ik Chang, "Baltic Sea Trade and the Netherlands in the 17th Century- Baltic grain trade," *Journal of central & east European studies*, Vol.33 (2013): 243-244.

## *Endeavoring to Stick to the Free-Trade Principles around 1850*

During the Industrial Revolution in the middle of 18th century, a rapidly growing population was a common phenomenon all over Europe. “In 1795, [the Netherlands] still only had 2.1 million inhabitants and this number increased to 3.0 million in 1850. Subsequently, the number of Dutch people grew to 5.2 million in 1900.”<sup>43</sup> The population growth soon increased per capita income, eventually the momentum to trigger the demand for a variety of agricultural products in Europe. The expansion of the demand for various agricultural processed products let the Dutch pioneer a new abroad market by free-trade principles.

Along with the process of population growth, the average income of the European rose, at first slowly but then more rapidly, giving people more freedom to spend their money on goods other than the bare necessities and basic foodstuffs... In practice, it meant a growing demand for meat, dairy products and eggs, but also for more vegetables, fruits, sugar, flowers, etc.<sup>44</sup>

Most directly, there was another historical event that profoundly made an impact on Dutch agriculture. This is the repeal of the Corn Laws in 1846 in England for lowering wages in order to promote industrialization. The British Parliament had decided to abolish import restrictions and permit the importation of foods grown elsewhere into England, which, in turn, stimulated demand. Thanks to the repeal of the Corn Laws, the Netherlands did obtain various benefits from the growing foreign demand. The exports of livestock and meat, as well as arable and horticulture products to England gave the Netherlands much wealth. “It was the horticultural sector that benefited most from the prospects that foreign markets offered.

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<sup>43</sup> Jan Bieleman, *Five centuries of farming: A short history of Dutch agriculture 1500-2000*, 149.

<sup>44</sup> Bieleman, ‘Dutch agriculture’, 1996, quoted in Jan Bieleman, *Five centuries of farming: A short history of Dutch agriculture 1500-2000*, 150.

...the share of horticultural products in the whole of agricultural exports increased from 2 per cent on 1846 to as much as 17 per cent in 1926. (Figure 6)<sup>45</sup> These performances were the coincidental result of the industrialization of countries near the Netherlands, especially England, and of the liberalization of trade.

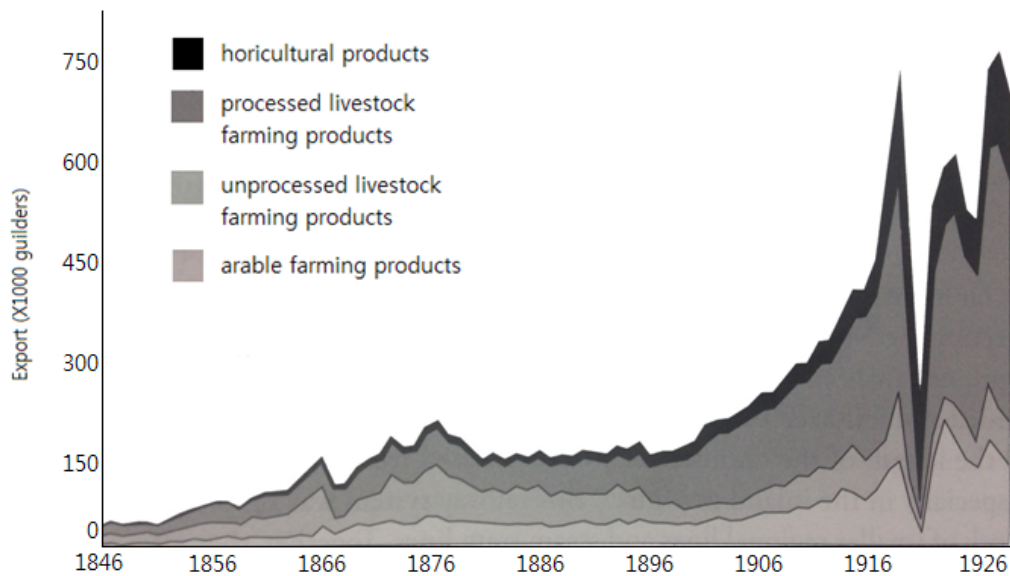


Figure 6. *The Exports of Agricultural and Horticultural Products in the Netherlands (1846-1926)*

Source: Jan Bieleman, *Five centuries of farming: A short history of Dutch agriculture 1500-2000*, *Mansholt publication series – Volume 8* (The Netherlands: Wageningen Academic Publishers, 2010)

However, at that time, the advancement of transportation technology introduced faster and bigger steamships, which meant importing growing quantities of cheap crops from the United States and Canada in the 1880s.

New maritime transport made it possible to ship large volumes of grain cheaply to Europe. Within a few years the European import of American grain took off dramatically, which led to a drastic drop of grain prices. The import of cheap American grain in particular provoked a call for protection in Western Europe. The governments of some countries responded, while

<sup>45</sup> Jan Bieleman, *Five centuries of farming: A short history of Dutch agriculture 1500-2000*, 151.

those of others did not.<sup>46</sup>

“The historiography of 19th century agriculture depicted the ‘great depression’ of the 1880’s and 1890’s merely as a ‘cyclical economic’ problem, caused by the sudden and increasing flow of grain coming from the New World to Europe causing grain prices to fall.”<sup>47</sup> Nevertheless, the Dutch did not give up free-trade principles and indiscriminately permitted the imports of cheap foreign grain in contradistinction to the Germans and the French, who typically used infant industry protection. Although the Dutch farmers were almost bankrupt at that time, they made the best use of this crisis as great opportunities. The Dutch government bureaucrats were eagerly committed to further efforts. “It was mainly a question of improving the level of knowledge in agriculture through research, extension and education as well as improving land as a factor of production.”<sup>48</sup> Furthermore, the reinforcement of forward and backward linkage such as vertical integration of agricultural product chains was a private initiative that played a key role in the formation of agricultural cooperatives. This eventually contributed to bringing down the production costs and improving the quality of agricultural products that achieved international competitiveness. The Dutch decision to maintain free trade at that time was of fundamental importance for the development of modern Dutch agriculture. As a result, various organizations were established at that time, such as the Wageningen University leading the direction of agriculture, horticulture, nature and rural development, founded in 1876, the DLO foundation of the first agricultural research station established in 1877, and the first cooperative bank for agricultural loans established in 1886.

Such passionate supports from government came at a turning point in the feed industry

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<sup>46</sup> Piet Rijk and Ernst Bos, *Dutch agriculture and horticulture with a glance at South Korea: Policies and results in the past, present and future* (The Hague: LEI Wageningen UR, April 2009), 43.

<sup>47</sup> Jan Bieleman, *Five centuries of farming: A short history of Dutch agriculture 1500-2000*, 155.

<sup>48</sup> Piet Rijk and Ernst Bos, *Dutch agriculture and horticulture with a glance at South Korea: Policies and results in the past, present and future*, 44.

and food processing industry. The importation of crops at a low price served as momentum to develop the feed industry that sequentially promoted the growth of dairying and the pork and poultry industries. Thanks to its geographic advantage, Rotterdam is the central harbor in Europe for the importation of relatively cheap cereals and crops mainly used as food for livestock. The livestock processed products were one of the main items of export to other countries. Consequently, around 1900s, the livestock sector exceeded half of the total agricultural output value-dairy and beef cattle (33 per cent) and pigs and poultry (17 per cent).<sup>49</sup>

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<sup>49</sup> Young-gon Go, and Jung-hwan Lee, *The proper understanding of Dutch agriculture*(2), 5-6.

## *Overcoming Protectionism after World War I-II and the Great Depression*

The Great Depression of the 1930s, after the First World War, provoked the rapid price reduction in agrifood as well as all kinds of products. In the situation that there was overproduction in arable production and livestock farming by advances in agricultural sciences like fertilizers and concentrates, many countries strongly restricted imports from outside. Consequently, as the price of international agricultural products fell drastically and the value of the Dutch guilder was revaluated, the price level of Dutch agricultural products further declined.

Western European countries, therefore, restricted imports to protect domestic industries, bringing about the result of the high level of protection for agriculture. Not only were import tariffs increasing, but also fixed and variable import tariffs were adopted. At first, the Netherlands tried to keep the free-trade stance, but as the situation was urgently deteriorating, the Netherlands's government was forced to engage in the market, applying import duties, export subsidies, import and production quotas.

However, after the Second World War, the independence to colonial countries, where they had filled the role of food supply base, arose the problem of food shortages in Western European countries. The expansion of food production was set as a top priority task. "Government policy towards agriculture and agro-scientific research were now aimed especially at an increase in production per unit of labour, i.e. at an increase in labour productivity."<sup>50</sup> At that time, the Dutch government modified agriculture policies toward the direction of market liberalization rather than direct policies for supporting agricultural product prices.

There were five success policies - mechanization, intensification, specialization,

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<sup>50</sup> Jan Bieleman, *Five centuries of farming: A short history of Dutch agriculture 1500-2000*, 241.

rationalization and up-scaling. The Marshall funds contributed to the mechanization of Dutch agriculture. For example, the farmers' workhorses were replaced by tractors rapidly. The number of tractors increased from 18,000 in 1950 to 135,000 in 1970. In the same period, the number of farm horses decreased from 230,000 in 1947 to 50,000 in 1970. And the milking machine and the combine harvester were the most significant innovation of the mechanization for raising both quantity and productivity.

The increasing amounts of fertilizers were the typical example of intensification. Especially, fertilizers including nitrogen increased yields per small arable land area. In addition, concentrates for livestock, insecticides, fungicides, herbicides were very useful to save labour and time in the battle against weeds. Without fertilizers to increased yields and machinery to collect them efficiently, it was impossible to feed a growing population.

At that time, most Dutch farmers had been doing combined agriculture, like raising many kinds of livestock and cultivating both edible plants and feed grains. However, in the over-production problem, Dutch farmers averted their eyes into world markets rather than depressed domestic market, which was a chance to promote specialization. Nowadays, Dutch farmers focus on one or two products among the most competitive varieties.

“In terms of rationalization and up-scaling the activities of government institutions in the field of land consolidation must be mentioned. In 1958 a *Meerjarenplan voor ruilverkaveling* (long-term programme for land consolidation) was published.”<sup>51</sup> The Minister of Agriculture aimed at farm scale improvement for increasing labour productivity. Furthermore, in 1985, the Land Reconstruction Act was enacted for fulfilling the public function of nature, scenery and recreation. And the government, in 1963, established the development and reconstruction fund for relieving the financial difficulties of small farmhouses. These endeavors, no price and income supporting for overcoming protectionism

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<sup>51</sup> Jan Bieleman, *Five centuries of farming: A short history of Dutch agriculture 1500-2000*, 243.

in the difficult situation, finally combined to make the Netherlands the most productive in the world in the agricultural sector.



## South Korea's Protectionist Policy for Rapid Economic Growth

The biggest differences between South Korea and the Netherlands can be found in the land governance and the initial process of economic development. In most European countries including the Netherlands, the feudal system was virtually abolished in the Middle Ages due to the failure of the Crusades and the spread of the money economy by the development of European cities. Therefore, many serfs were also liberated from feudal ruling, which means they could have their own land to cultivate and make their own profits by themselves. In the Netherlands, from the 12th and 13th centuries, land reclamation, urbanization and colonization “led to the nobility and Church to offer attractive terms, and free status, in order to coax peasant farmers to work newly cultivated area as well as counter the attraction of migration to newly colonized regions...”<sup>52</sup> In other words, there were already the incentives for improving agricultural productivity in most European countries' individual farm houses by distributing lands to peasant farmers and liberation from seigneurial control.

In comparison, Korea's history was suffering whether enforced or voluntary, from severe subordination of land ownership and economic development. Korea had been under centralization and dominance from the Joseon Dynasty until the early 1900s. All the land belonged to a small number of the ruling class. Also, at the time to escape the medieval state, Korea could not stand alone in the arena of the struggle among the world powers. For thirty-five years, Korea was under Japanese colonial rule system and all countries' resources were ruthlessly exploited. After liberation in 1945, farmers could finally have their own land under the land reform by the U.S. Military government. However, after the Korean War for three years, Korea's agriculture became a victim for rapid economic growth, and eventually lost its growth foundation.

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<sup>52</sup> Van Houtte, *Economische en sociale gesch.* 48-52, quoted in Jonathan Irvine Israel. *The Dutch Republic: Its Rise, Greatness, and Fall 1477-1806* (Great Clarendon Street: Oxford University Press, 1995), 106.

However, in the Netherlands, miracle economic growth in the sixteenth centuries, so called 'Golden Age' and the emancipation of serfs in the Middle Ages resulted in a big gap compared to agricultural development in South Korea. In this chapter, I will analyze the reasons why South Korea's agriculture policy has subordinated agriculture, unlike the Netherlands: (a) land reforms under thirty-five years of Japanese colonial rule and the U.S. Military Government; (b) the unbalanced modernization strategy of the 1960s; and (c) the *Saemaul Movement* in the 1970s.

## *Land Reforms: the Failure of Agriculture Modernization*

The Japanese's thirty-five years of colonial rule did degenerate South Korea's agriculture into a base of food supply for a full-scale invasion into China. Exploiting the Korean Peninsula as a major supply of an agricultural goods was the Japanese colonialism's primary goal. Therefore, "Korea became Japan's rice depot, and Korea's living standard deteriorated accordingly. Consequently, many Korean families were separated as many Koreans fled to Manchuria after losing land or tenant rights to the Japanese colonial government."<sup>53</sup> Under the pretext of "land survey,"<sup>54</sup> the establishment of a modern land system by law, agriculture was the subject of exploitation by confiscating approximately 15 per cent of land and 60 per cent of forest,<sup>55</sup> resulting in the collapse of tenant farmers without any follow-ups for land users and reinforcement for the private landlord system.

Since Korea's liberation from Japanese colonial rule, Korea fell again under the control of outside forces. The Korean Peninsula was divided into two nations by the situation of the Cold War between the U.S. and the Soviet Union. In South Korea under the U.S. Military Government, the justification for a strong anticommunism ideology made Korean society pursue only the U.S.'s interests for power in the Cold War. Therefore, the U.S. Military Government wanted to easily govern Korean society by the previous colonial governmental organizations. The agriculture situation at the time was as follows.

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<sup>53</sup> Hong-yung Lee, "Korea's Japanese legacy," the Association for Asian Studies, Chicago, (March 15, 1997), quoted in Hun-joo Park, "The Origins of Faulted Korean Statism," *Asian Perspective* 27 (2003): 165-195.

<sup>54</sup> Ministry of Strategy and Finance, *2012 Modularization of Korea's Development Experience: Land reform in Korea* (Seoul : Ministry of Strategy and Finance, 2013), 52-53.

"The land survey served as the basis for establishing a system of land registration. Besides establishing property locations and rights of land ownership, the land survey also used to appraise land values for tax purposes and map topographic and terrain features. The Japanese Government General of Korea announced a short period of time – only 30 days – in order for all Koreans to confirm their land ownership. However, most farmers overlooked the importance of the land investigation project and did not verify their ownership with required documents, resulting in abandonment of land ownership and transfer of the ownership of unregistered lands to Japanese."

<sup>55</sup> *Ibid.*, p. 53.

At first, it was likely that the U.S. Military Government removed the control and it was left to the free market. However, only merchants' cornering and hoarding as well as profiteering were encouraged under the condition of lack of agricultural products. As a result, the measure of food liberalization changed into the delivery system. Moreover, farmers were highly repulsed by the introduction of market mechanisms to agriculture, and so no market system was any longer considered. In order to solve these problems, the U.S. Military Government referred to land reform as practically the best alternative.<sup>56</sup>

Under the U.S. Military Government, the land reform from 1945 to 1952 was definitely successful in distributing land to peasants. After land reform, the proportion of independent farmers grew tremendously from 14.2 per cent in 1945 to 80.7 per cent in 1951.<sup>57</sup> Conversely, the proportion of tenant farmers dropped drastically from 50.2 per cent in 1945 to 3.9 per cent in 1951.<sup>58</sup> In conclusion, through South Korea's land reform, the landlord class nearly collapsed.

However, independent farmers lacked enough capital to invest in agriculture for increasing agricultural production. The allotment of land into small individual tracts eventually let most Korean farmers fall to petty landholders who were under government control because they depended on the government to invest "in the input of agricultural materials such as seed, chemical fertilizers and farming equipment."<sup>59</sup>

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<sup>56</sup> Ministry of Strategy and Finance, 2012 Modularization of Korea's Development Experience: Land reform in Korea, 59.

<sup>57</sup> Ibid., p. 107.

<sup>58</sup> Ibid.

<sup>59</sup> Ibid., p. 86.

*The Weakened Foundation of Agricultural Economic Development by Unbalanced Modernization in the 1960s*

In June 1961, right after a military coup, Park Jung Hee regime's early economic development was an unbalanced economic growth plan, suggesting that "stand-alone production capacity could sustain itself without economic relief from the U.S."<sup>60</sup> President Park, in the long run, wanted to wean itself from any reliance on foreign capital, which accumulated domestic capital and simultaneously, through promoting the growth of import-substitution industries, hindered the outflow of valuable foreign currency.

Under the expansion of the domestic market as the foundation for national economic development, President Park sought first to expand domestic demand by improving "the productivity of agricultural goods, while constructing key industries such as electric power, coal, oil refinery, colligated steel manufacturing, and cement to a certain degree of independency."<sup>61</sup> The primary focus of his agriculture policy was the eradication of rural poverty together with "the clean sweep of outstanding usurious loans for farmers"<sup>62</sup> and rice price increases.

Nevertheless, at that time, the nationalistic economic perspective of assuming the nation's active intervention resisted U.S. aid agencies pursuing a neoclassical economics approach. "From the position of domestic monopolistic conglomerates, rearing the agricultural industry was going against their direct interests since such would remove the monopolistic rents they were enjoying."<sup>63</sup> In a difficult economic situation that South Korea had absolutely to be dependent on foreign aid, it was very difficult to enforce the first of the Five-Year Economic Development Plan (FEDP) as originally intended.

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<sup>60</sup> Youn-guck Kang, *Adaptive implementation of the five-year economic development plans* (Seoul : Ministry of Strategy and Finance, 2008), 69.

<sup>61</sup> *Ibid.*, p. 74.

<sup>62</sup> *Ibid.*, p. 71.

<sup>63</sup> *Ibid.*, p. 74.

As a result, the adoption of an export-led industrialization strategy with readjustment of the won-dollar exchange rate to a realistic level delayed the government's priorities for agricultural investment. The Vice Prime Minister Chang, Gi-young “towards a more export-oriented development policy through the market liberalization, focus[ed] upon export-oriented industries, and the greater reliance upon foreign capital,”<sup>64</sup> which “contributed to achieving the annual average growth rate of 8.5 per cent of GNP and the annual average growth rate of 5.6% of per capita GNP during the First FEDP planning period.”<sup>65</sup>

However, the answer to the harsh realities in our agriculture can be found in the process of our rapid compressed economic growth. The early economic development plans since the 1960s aimed at a low-wages policy based on the low price of agricultural products. This induced the exodus of young adults from the agricultural areas, resulting in the movement of low wage workers in the agricultural areas into urban areas. This phenomenon, therefore, led to the structure of small-scale farming, which was the trigger for the collapse of agriculture that has been sacrificed for economic growth.

In the 1960s, the President Park Jung Hee regime continued low-price policy for staple food-grain, which inhibited the growth of food production. After 1955, the Korean government dealt with the resultant food gap problem by purchasing U.S. grain with its local currency under the U.S. Public Law 480 program. This helped to keep industrial wages down, which in turn facilitated rapid growth by retaining competitive advantage of Korea's labor-intensive exports. Low food prices also helped to diffuse or prevent urban unrest by providing low-cost staples to the urban industrial area, the key potential threat to the regime.<sup>66</sup>

As mentioned above, economic growth during the first FEDP planning period was

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<sup>64</sup> Youn-guck Kang, Adaptive implementation of the five-year economic development plans, 3.

<sup>65</sup> Ibid., p. 82.

<sup>66</sup> Hun-joo Park, The Origins of Faulted Korean Statism, 83.

achieved through the sacrifice of agriculture. President Park, inspired by economic achievement, first attempted to apply the export-oriented industrialization strategy to the agriculture sector. Using the same strategy of urban industrial sector for fostering conglomerates and promoting export industrialization by foreign capital funded by the government, President Park wanted to develop large-scale capitalist farms by the government's financial support. But, the elimination of a ceiling on the ownership of farmland and a revised Agricultural Land Act enabling the development of large capitalist farm lands was rejected by the National Assembly.

## *The Saemaul Movement of the 1970s Focuses on State Populism*

From the Second FEDP, typical economic policies focused upon increasing the production of crops on the premise of the peasant structure and strongly supporting the heavy chemical industry. At this period, small farmers' productivity and viability was enhanced by such comprehensive agricultural development policies as a high rice-price policy, the high yield of rice varieties including Tong-il, the *Saemaul Movement*, and the construction of a large scale multipurpose dam.

Although the unbalanced modernization approach with "selective industrial policies and export-oriented trade policies"<sup>67</sup> under the first-Second FEDP achieved successful economic development in the 1970s, there were some side effects such as the stagnation of rural development and the huge gap between urban and rural income. "The government deficit grew bigger due to the Heavy and Chemical Industrialization programme (HCI), distorted credit policy and the slowdown in exports. As soon as the high rice-price policy stopped, the gap between city and countryside income began to increase once again."<sup>68</sup>

The *Saemaul Movement* began from the 1970s "under the rapid urbanization through industrialization,"<sup>69</sup> whereby the rural or regional economy turned for the worse compared to the urban economy moving upward. There were so many factories constructed "around metropolitan areas such as Seoul, Busan, Daegu, and Incheon where relatively well-equipped with infrastructures, and encouraged rural people to move to these urban areas to get jobs."<sup>70</sup> Therefore, this industrialization process devastated rural society. "Such spatial disparity between urban and rural area hindered more competitive national system through regional

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<sup>67</sup> Soo-young Park, "ANALYSIS OF SAEMAUL UNDONG: A KOREAN RURAL DEVELOPMENT PROGRAMME IN THE 1970s," *Asia-Pacific Development Journal* Vol. 16, No. 2, (December 2009): 115.

<sup>68</sup> Seung-mi Han, "The New Community Movement: Park Chung Hee and the Making of State Populism in Korea," *Pacific Affairs*, Vol. 77, No. 1 (Spring, 2004): 76.

<sup>69</sup> Jin-kwang So, *2012 Modularization of Korea's Development Experience: Reforming Governments for Saemaul Undong* (Seoul : Ministry of Strategy and Finance, 2013), 539.

<sup>70</sup> Ibid.



harmony, [resulting in] so much political cost. Above all, the devastation of rural communities made it difficult to manage national territories effectively and efficiently.”<sup>71</sup>

In other words, due to unbalanced rapid industrialization, it was a swift and efficient to promote the economic development and growth, while it caused incongruity or polarization between the urban and rural economies. “This unbalanced spatial structure had become burdensome to the political leadership to manage and operate the country. That is why the Korean government began to pay serious attention to rural problems, while promoting industrialization actively.”<sup>72</sup> This created the opportunity to promote the New Community Movement the ‘*Saemaul Movement*.’

The program was designed to "transform farmers' consciousness" by demonstrating that through the practice of "diligence, self-reliance and cooperation," they could not only upgrade their own living conditions and productivity but contribute substantially to national development. The New Community Movement has, in fact, stimulated an enormous amount of effort in local road and bridge building, house repair, and the construction of irrigation and water supply systems, sanitation facilities, and electrification.<sup>73</sup>

The objectives of the *Saemaul Movement* are “(a) income generation; (b) living environment and basic rural infrastructure improvement; and (c) capacity-building and attitudinal change.”<sup>74</sup> Among those listed, the most important goal was to increase the income of farmers as represented by such slogans as the ‘*Make a Better Life Movement*.’ Though different arguments existed regarding how to contribute to the income of farmers, in my opinion, the *Saemaul Movement* was inadequate to hinder the collapse of the rural

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<sup>71</sup> Jin-kwang So, 2012 *Modularization of Korea's Development Experience: Reforming Governments for Saemaul Undong*, 539.

<sup>72</sup> Ibid.

<sup>73</sup> Vincent S. R. Brandt, *The Agricultural Sector in Contemporary South Korea*, *Asian Affairs*, Vol. 7, No. 3 (Jan. - Feb., 1980): 186-187.

<sup>74</sup> Soo-young Park, *ANALYSIS OF SAEMAUL UNDONG: A KOREAN RURAL DEVELOPMENT PROGRAMME IN THE 1970s*, 116.

economy for the following reasons.

First, regarding the farming population, we can see from Table 9 that whereas the portion of the agriculture population decreased from 66.4 per cent in 1960 to 32.3 per cent in 1980, the portion of the non-agriculture population proportionately increased from 33.6 per cent in 1960 to 67.7 per cent in 1980. Also, the quality of reduction is quiet poor because the share of high quality of labor forces (from 14 to 49 years old) continually decreased from 81.2 per cent in 1961 to 70.4 per cent in 1978.<sup>75</sup>

Table 9. Indicators of Population Changes in South Korea

	Unit	1960	1966	1970	1975	1980
Total population	Thousands of people	29,945	28,327	31,435	34,679	37,407
The economically active population	Thousands of people	7,556	8,859	10,199	12,340	14,454
The agriculture population	Percentage	66.4	59.6	51.6	46.4	32.3
The non-agriculture population	Percentage	33.6	40.4	48.4	53.6	67.7

Source: The Bank of Korea, Ministry of Agriculture and Forestry (2003), "Volume 2 of the 100 years of the Korean agricultural and rural history."

Also, the *Saemaul Movement* had another purpose. At that time, the government intentionally wanted to move abundant high-quality workforces from rural areas nurtured by the *Saemaul Movement* into urban sectors for rapid industrialization. This is another evidence of the sacrifice of agriculture. Although the *Saemaul Movement* was "publicized widely as a "comprehensive rural development plan," [it was] targeted more at turning farmers into industrial workers rather than enriching them in their normal pursuits."<sup>76</sup>

<sup>75</sup> Byeong-ju Hwang, "The change of agricultural production process and peasants appropriation of state through the Saemaul undong in 1970s," *Korean Social History Association, Society and History*, Vol. 90 (2011): 26.

<sup>76</sup> Seung-Mi Han, *The New Community Movement: Park Chung Hee and the Making of State Populism in Korea*, 76-77.

Second, Table 10 shows that total household income definitely increased during this period due to the diversity of income resources and the expansion of non-agriculture income. From 1970 to 1979, we can see the steady increase of household income. However, according to Figure 7, the ratio of farm household income to urban labour income increased from 1971 to 1975, but then decreased rapidly after 1975.

Table 10. Compositions of Agriculture Household Income in South Korea (Korean won)

Year	Household income	Agricultural income		Non-agricultural income	
		Amount	Ratio (percentage)	Amount	Ratio (percentage)
1970	255,800	194,000	75.9	61,800	24.1
1973	480,700	390,300	81.2	90,400	18.8
1976	1,156,300	921,200	79.7	235,100	20.3
1979	1,531,300	1,531,000	68.7	696,200	31.3

Source : National Council of Saemaul Undong Movement in Korea (1999) “Saemaul Undong in Korea.”

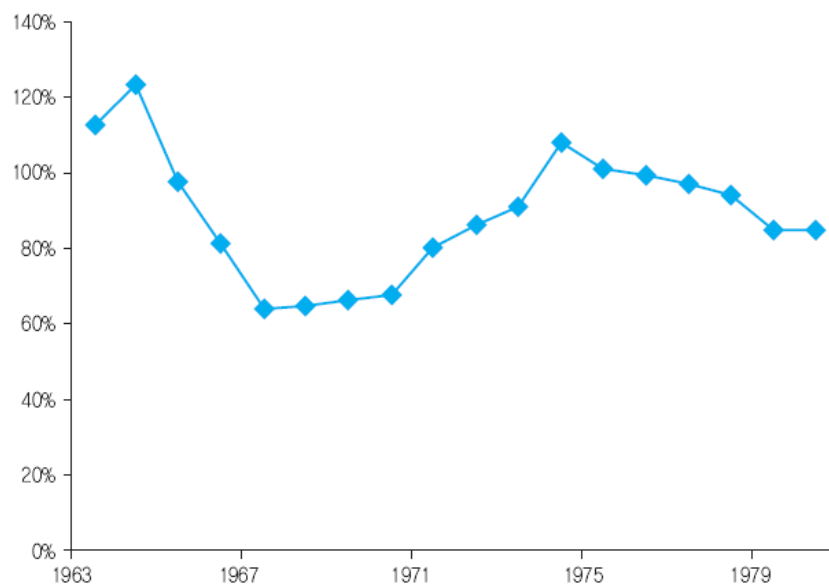


Figure 7. Ratio of Farm Household's Income to Urban Labour Income in South Korea

Note: The comparison is made using the income per capita in order to take into account the differences in household size.

Source: Jin-kwang So, 2012 Modularization of Korea's Development Experience: Reforming Governments for Saemaul Undong, 754.

In conclusion, the Saemaul Movement was launched in 1971 and has been energetically pushed by the bureaucracy ever since.

While Saemaul Undong helped to alleviate absolute poverty in rural villages by providing better access and opportunities, it was not sufficient to address the structural problems of agriculture, which required much more physical and financial investment and drastic changes in agricultural policies rather than the massive mobilization of human labour.<sup>77</sup>

After all, the standard of living of peasants has never improved as much as in urban areas. The Park regime tacitly used this movement as a means of securing favourable voting constituency and supplying high quality farm labour to urban areas.

In other words, South Korea's agriculture started from not letting it function into the market and never helping it survive by itself, like the Netherlands, keeping it under the strong influence of political purpose from the beginning. Without any fundamental reform attempts for retaining the effect of economies of scale and increasing competitiveness to survive in the tough market, our agriculture was not prepared sufficiently to respond to the trend of full-scale market liberalization that began in the 1980s. Though the government sought to shift its development strategies towards liberalization in both investment and external trade, our agriculture was not well enough for intrinsic competitiveness, restructuring policies and time missed.

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<sup>77</sup> Soo-young Park, ANALYSIS OF SAEMAUL UNDONG: A KOREAN RURAL DEVELOPMENT PROGRAMME IN THE 1970s, 117.

## V. CONCLUSION

### **Main Obstacles to Agricultural Advancement with Lessons from Dutch Agriculture**

In terms of the generally-accepted social idea as well as the traditional theory of economic development, agriculture could not come one of the promising high value-added industries, but is instead recognized as one of the declining industries in South Korea. However, nowadays, the multi-functionality of agriculture has received great attention as well as the primary function of producing food and meeting the satisfaction of basic needs. Besides the function of supplying food, “agriculture also produces a wide range of non-commodity goods and services, shapes the environment ... and contributes to economic growth”<sup>78</sup> - “biodiversity conservation, recreation, water management, climate control”<sup>79</sup> and alternative resources. Therefore, agriculture is not just a matter of choice, but an essential ingredient for sustaining economic growth and our better life.

In this thesis, I have found a successful case in agriculture. The Netherlands, for instance, is the second largest agricultural exporting country after the U.S. and attributes most of its trade surplus to agrifood trade. The Dutch have acquired abundant land from nearby coastal areas by extensive reclamation projects since the 13th century. This land usage has specialized in livestock and dairy farming, making it possible for the Dutch to produce various processed products. The Dutch have coped with natural obstacles through free trade, expanding their narrow territory into the globe and have obtained a wide range of resources.

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<sup>78</sup> Van Huylbroeck, Guido., Vanslebrouck, Valerie., and others. “Multifunctionality of Agriculture: A Review of Definitions, Evidence and Instruments.” *Living Rev. Landscape Res.*, 1, 3 (2007): 5.

<sup>79</sup> *Ibid.*, p. 29.

Also, as the Dutch government has followed 'market choice' in favor of competition and efficiency, the Dutch farmhouses have been developed by family-managed and specialized conglomerates. The Netherlands government has continued to support all efforts for agriculture's public function and market activation, rather than income compensation and price support by farm payments as in South Korea.

In this thesis, although I want to try to compare both countries' agricultural development process, there are a few limitations. The Netherlands, similar to other European countries, has never experienced any kind of government-initiated agricultural development policies as in South Korea. The government-initiated policies of economic development plans were due to special and unique circumstances resulting from East Asia's political situation. Therefore, South Korea's agricultural development policies based on economic and political circumstances were hardly linked with the Netherlands.

However, in terms of divergent backgrounds in the progress of agricultural development, the experience of Dutch agricultural development has shown that natural factors are not the main obstacle to agricultural development. In my opinion, the main obstacles to our agricultural development are not natural but institutional. In analyzing the above mentioned differences between South Korea and the Netherlands, I can determine the three most important obstacles in our agriculture.

First is that the industrial support policy was biased towards certain social and economic groups. Historically, our agriculture has been the victim. Under the rule of the Joseon Dynasty's feudal society and Japanese colonial regime, agriculture was the subject of exploitation for maintaining the ruling caste and was never given high independent status in society. After liberation from Japanese colonial rule, the situation was perfectly the same. The early economic development plans for modernization have focused on the unbalanced economic policies and political purposes since the 1960s. Therefore, agriculture has been

excluded from the priorities of the national economic plans. At that time, the government adopted industrial support policies which concentrated on certain economic groups and selected industries as well as a few conglomerates. As a result, the obsession of a relentless pursuit of growth and a rapid growth rate was represented by the belief of the first growth strategies as a collusion of *Chaebol* and increasing social costs. And, based on the sacrifice of the majority of members of society, the system that the minority monopolize interests has been maintained until now. Agriculture and its failings accounted for a large proportion of these sacrifices during the period of rapid economic growth experienced in the 1960s and 1970s.

Second is the long-term absence of a commitment to develop high quality human capital. It is proven that Korean farmers were not independent agents of economic activity, but only poor tenants for maintaining the ruling classes at that time. Therefore, Korean agriculture had no fundamental ability to foster any sense of sovereignty or independence in market competition. As the government had been a provider of capital and technology, our agriculture did not accumulate itself with human capital in agriculture industries. Therefore, there are not enough outstanding individuals to accept capital and technology. No matter how remarkable technologies and fertile land are, land and capital productivity will not grow without excellent workforces to operate technologies and cultivate land.

Lastly, without a social agreement scheme by democratic procedures, agriculture industries were forced to sacrifice and were not granted fair compensation. It is difficult for agriculture to grow only by the efforts of the agriculture production sector. If all sectors that make up agricultural chains cooperated with each other, competitiveness in agriculture could be strengthened. Thus, it is necessary to institutionalize a system in which the entire agricultural chain agrees to work together. However, in our country, the tradition of a national social agreement still has not been sufficiently established. Consequently, it is impossible to

lead a national consensus. People have overlooked the importance of agriculture and have regretted huge investments in agriculture. This has limited the scope of agricultural policy choices and inhibited the establishment of an effective decision-making system.

Obviously, I think that the gap between South Korean and Dutch agriculture is due to the efficiency gap between the two countries. In fact, South Korea's agricultural productivity is considerably lower than that of the Netherlands. The reason that agricultural productivity remains low by comparison with advanced countries like the Netherlands is the lack of effective institutional systems. Many people have been fascinated with the current state of agriculture in the Netherlands: free trade systems, outstanding infrastructure, research, extension and education, farmers' organization systems and so on. However, the first priority is to acknowledge the reality of our situations and derive a political consensus about the policy of South Korean agriculture.

Since the Uruguay Round (UR), South Korea's agricultural policies have been conducted in such passive aspects as proposing to compensate for the damage caused by the agricultural market liberalization. While ignoring the development stage, it is unreasonable to establish a policy by simply making a comparison with the current agricultural policies of advanced countries in agriculture. As compared to such advanced agricultural countries as the Netherlands, relating to the production-based, distribution, human resources, technology, welfare, control of supply and demand, the most important thing is to secure agricultural experts. One of the reasons that the Netherlands could be the most powerful nation in Europe in the 17th century, known as the 'Golden Age' in Dutch history, was that there was a huge influx of excellent workers who escaped from religious persecution during 'the Reformation.' The Netherlands give us a lesson that in the capitalist market economy, competitive farmers could themselves be fostered adequately through competition, not by the government and its regulations. Therefore, our government should establish policies to secure outstanding



manpower rather than provide agricultural subsidies.

In addition, for the desirable development of agriculture in South Korea, a solid national consensus is needed. Just as the Social Economic Council (SER) in the Netherlands is comprised of the workers, the employers and the government for social consultation, we need to set cooperative governance for realizing our agricultural policies efficiently. By establishing a national council of agriculture, the delegates of farmer groups, cooperatives, processing and distribution companies, import and export companies and consumers should be participants in social consultation as an independent status of laws.

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## Research

Agricultural Economics Research Institute, LEI	<a href="http://www.lei.nl">www.lei.nl</a>
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