

# **Policy Implementation of the Green Revolution in Korea**

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## **I. Introduction**

Recently, academics have begun to explore the area of comparative policy implementation,<sup>1)</sup> Subsequently, two research trends have developed. One trend compares the differences and similarities of the policy implementation process of the United States and European countries.<sup>2)</sup> The other has focused on the study of policy implementation in a single developing country.<sup>3)</sup>

## **II. An Overview of Korean Policymaking and Implementation**

Policy implementation in developing countries was rarely studied until the 1970s. At this time, the burgeoning field of policy implementation in the United States<sup>4)</sup> inspired a paralleled interest in implementation in developing countries. This increased interest led to the recognition of distinct aspects of policy implementation processes in developing countries that were mainly derived from the failure of development policy. This failure can be attributed to the fact that policy formulation rarely considered the political dynamics and conflicts that can arise in the process of policy implementation. These implementation failures in developing countries taught us that a "more balanced concern" for both policy formulation and its implementation process was needed.<sup>5)</sup>

Studies of policy implementation in developing countries mainly depended on a simple "input-output model" which was based on the separation of administration from politics. According to this simple model, the single most critical factor in determining the achievement of development goals was the competence of the public administration system. This was due to the fact that the basic assumption of the input-output model was that "implementing organization's capability to convert or process critical inputs of the program into certain outputs would depend, to a large

extent, on administrative capability.”<sup>6)</sup>

Thus, most implementation studies during this period focused on the identification of administrative constraints or obstacles.<sup>7)</sup> In short, the input-output model simply replaced implementation problems with the problems of public administration.

In response to this, political scientists during the 1980s began to study policy implementation vis-a-vis its relation to policy characteristics.<sup>8)</sup> Grindle, for example, focused upon political conflicts that arose during policy implementation rather than measuring administrative competence.<sup>9)</sup> Two important agendas in Grindle’s research are; 1) the link between policy characteristics and their subsequent implementation, and 2) the connection between implementation problems and the political context in which the policies were implemented.

According to this perspective, policy implementation is more than a mechanical transformation of inputs into outputs. It involves, according to Grindle, “fundamental questions about conflict, decision making, and ‘who gets what’ in a society.”<sup>10)</sup> Therefore, the implementation process is especially central to politics in developing countries because “a large portion of individual and collective demand making, the representation of interests, and the emergence and resolution of conflict occurs at the output stage.”<sup>11)</sup>

Although insightful, this argument has two limitations that are interrelated. First, Grindle has paid too little attention to the link between the way a public policy is formulated and the way the policy is implemented. Second, Grindle also ignored the link between the problems of policy formulation and the problems of policy implementation. Especially, she paid too little attention to the relation between the way the content of policy mandates is constructed and their effects on subsequent policy implementation. She simply assumed that the policy and its content is just given to the stage of policy implementation.

The way to understand policy implementation cannot be separate from the way policy mandates are formulated. When dealing with developing countries, the recognition of the linkage between policy formulation and policy implementation is significant for understanding the implementation process.

According to Grindle, the consensual imperative for policy making in developing countries is relatively weaker than that in the United States and other European countries because the political mechanisms of policy formulation are generally closed to outside actors. Thus, she argues that the dynamics of “political participation and competition” in the developing countries can be more easily observed at the stage of policy implementation.

However, Grindle did not sufficiently consider the problems-common or idiosyncratic-of the policy formulation process in developing countries and their effects on the subsequent implementation process. In general, the problems at the stage of

policy formulation may be aggravated at the stage of policy implementation. In developing countries, the study of policy implementation can make a contribution to revealing the problems of policy formulation by observing problems of policy implementation. Some common or idiosyncratic problems of policy formulation in developing countries can be critical at the policy implementation stage. Some problems at the policy formation stage-for example, the closed policy formulation or non-consideration of feasibility-are never corrected, even at the implementation phase, without perfect control, monitoring, and feedback.<sup>12)</sup>

Especially when policy formulation is governed by few influential individuals rather than consensus or compromise among contending parties, the problem of policy formulation is revealed in the process of policy implementation. This is due to the fact that policy mandates formulated in closed political systems, such as those in developing countries, sometimes fail to account for the political dynamics and conflicts that arise during the implementation of such mandates. Subsequently, the linkage between problems at the policy formulation stage and problems at the implementation stage requires further research if we are to understand policy implementation in developing countries.

In addition, Grindle ignored why policy goals are set as they are, why goals are stated ambiguously (or clearly) and incoherently, and what the effects of the context of goal setting on the implementation process are. For understanding implementation problem in developing countries, the understanding of the way the policy mandates are formulated is quite important.

Due to the above limitations in Grindle's research on policy implementation, it would be advantageous to examine policy implementation in developing countries throughout the continuum of policy formulation, policy implementation, and policy performance. In short, policy implementation in developing countries can be explained not only by examining policy formulation process, policy content, and policy context but also by examining their effects on implementation performance.

### **III. Policy Implementation in Korea: Two Contradictory Views**

#### **1. The Imbalance of Interests between Policy Formulation and Policy Implementation**

As exhibited in other developing countries, the problem of the "imbalance" between policy formulation and policy implementation can be observed in Korea. This problem, which until very recently had not received serious consideration, is now the object of further evaluation. Four main causes of the imbalance can be traced from the characteristics of the Korean political system and its political culture.

First, the lack of interest in policy implementation is mainly derived from the

nature of the Korean political system, which is generally considered to be authoritarian. As in other developing countries, the Korean authoritarian system preferred to use coercion and control as intervention mechanisms in society rather than techniques such as bargaining, inducement, and voluntary compliance. Most politicians believed that implementation problems could be overcome by coercion, control, command, and mobilization. Thus, the significance of implementation processes for better development policies has not been seriously considered by political elites in Korea.

The second reason for indifference toward the implementation process is the Confucian cultural heritage. Traditionally, both the Korean people and the administrators have inculcated a value system based on "correct superior-subordinate relationships." This insures a smoothly operating hierarchy. Therefore, compliance from ordinary people and low-level administrators to the government directives was thought to be easily attained given governmental authority. Moreover, because of the Confucian political culture, once policy mandates are received from an executive, most administrators tried faithfully to attain the goals of the given policy without serious consideration of whether or not they were legitimate or whether the enforcement instruments used were appropriate and feasible.

Third, most implementation problems in Korea are overshadowed by the success of several nation-wide policies, such as the Saemaeul (or new village) Movement and rapid economic development policies of the 1970s. Most Koreans have thought that short-term successes were achieved by the strongly committed ideology of "we can." The spirit of "we can", when it associated with strong leadership, has virtually avoided the conception of implementation failure.

Finally, the lack of scholastic interest in policy implementation is associated with the relationship between regime characteristics and the role of the social scientist. Under an authoritarian political system, policy implementation failure was not openly discussed. Most criticism against authoritarian politics was focused on the problems of democratization or the problems of policy formulation, not on implementation failure.

In short, the imbalance of interest between policy formulation and policy implementation in Korea has been associated with the nature of the political regime, political culture, and some successful cases of important governmental policies which overshadowed other implementation failures. The concern of most Korean political scientists during the last few decades has been to make appropriate policies geared for rapid economic development, not how to implement such policies in appropriate and feasible ways.

## 2. Two Contradictory Views on Policy Implementation in Korea

How can one judge the nature of policy implementation in Korea? Two contradictory views on policy implementation in Korea can be identified from a review of the literature on Korean politics. We will label these "positive" and "negative" judgments of the policy implementation process.

According to the positive account, Korea can be treated as an exception developing country when compared to other countries that are struggling with implementation failures. L.P. Jones and Il Sakong (1980) argue in their book, *Government, Business, and Entrepreneurship in Economic Development: The Korean Case* (1980), that Korea is an extraordinary case because "Korean is even better at implementation than at planning."<sup>13)</sup>

A main reason for successful implementation process in Korea, according to Jones and Sakong, is derived from the characteristics of the Korean "hard state." The hard state is characterized as the rigorous exercise of compulsive and rigid enforcement of obligations on people in all social strata in order to implement public policies. Jones and Sakong's main argument is that the Korean government achieved most policy goals because it relied heavily on command, compulsion, and broadly exercised administrative discretion at the implementation stage. In contrast to the above view, the negative perspective argues that the single critical problem of implementing public policy in Korea is the compulsive and controlled intervention mechanisms during the policy implementation process. Jong-Youl Yoo (1986) points out that the compulsive nature of policy implementation in Korea is mainly attributed to the authoritarian nature of the Korean political system. He contends that:

Implementation strategies are almost non-existent. Policies are forced into implementation without taking into consideration their applicability to real situations. This is mainly because of bureaucratic authoritarianism. The bureaucrats have come to believe that the people can be forced to implement any policy that they choose.<sup>14)</sup>

There has been no systematic research on the effects of the authoritarian regime on policy implementation in Korea. Thus, it is difficult to evaluate which perspective is a more accurate representation of the Korean policy implementation process. However, it can be concluded that the two contradictory views look at different aspects of the policy implementation process. The positive perspective examined what was achieved and why. The negative view scrutinized how policy goals were achieved and what were the side-effects of such achievements, especially the effects of the compulsive and coercive implementation on Korean society.

The two views are also different in their normative focus. The former perspective emphasizes the intention and capacity of the political system to exercise intervention

mechanism for effective policy implementation. The latter perspective highlights the response of ordinary people and target groups on the policy performance exhibited by authoritarian regimes.

Lastly, the relationship between the policy formulation process and the policy implementation process is different in each perspective. Jones and Sakong's viewpoint assumes that the two stages of the policy process are separated. This assumption is based on a traditional politics-administration distinction. They state the most peculiar characteristic of policy making of Korean Government is "speed" and "flexibility." According to them, "rather than studying the problem to death, the government moves quickly to achieve the perceived benefits immediately and then modifies its position quickly as deleterious side effects become apparent."<sup>15)</sup> The results of speedy and flexible policy making, however, are confusion for the concerned parties. The responsibility to reduce these confusions was taken by the executive branches. The executive branch used compulsion, coercion and executive discretion with strong intervention mechanisms to justify the problems of speed and flexible policy making.<sup>16)</sup> In other words, the perspective implies that good implementation can justify some problems of policy making.

On the other hand, the negative perspective argues that most implementation problems are derived from the problems of the policy making process because the choice of policy alternatives is the most arbitrary part of policy making in Korea. According to this viewpoint, the nature of the policy making process can be described as a "personalized" policy making. Yoo argues that "the selection of policy alternatives is personalized to such an extent that not much rational analysis is allowed to intervene in the decisions of top policy-makers."<sup>17)</sup> Often the major determinant of final policy decisions is the "position" and "power" of those who proposed the policies. The personalized final decisions, without full consideration of feasibility for real situations, are implemented by authoritarian administrators with controlled and coercive intervention mechanisms.

The negative perspective also argues that implementation problems can be attributed to the lack of formal and systematic evaluation of policy performance and the implementation process. Policy evaluation activities are "invisible" in Korea. When an evaluation is done, it is not only intermittent and incomplete but used mainly for public relations purposes.<sup>18)</sup> Speed and flexible policymaking is not based on formal and reliable policy evaluation but, in most cases, on personal preference or judgment. When these policies are implemented, many undesirable side-effects or unintended consequences are created. In short, the negative perspective assumes that the problems of the policymaking process extend throughout the implementation phase.

### 3. Two Trends of Policy Implementation in Korea

A common limitation to both perspectives is their lack of applicability to various policy implementation processes. In other words, neither can explain why some policies are implemented effectively and others are not. There have been examples of poor or non-implementable policies, but there have also been instances of relatively effective and successful policy implementations in Korea.

Consequently, an alternative way to examine policy implementation in Korea during the 70s and 80s is to discern two significantly different trends; whether the President has strong commitments to the proposed policy or whether he is ambivalent. In Korea, as in other developing countries, the President has strong commitments to policy implementation when the policy under consideration is crucial to political benefits. In this case, presidential commitment not only influenced the content of policy mandates but also manipulated or governed the significant policy context in which the policy was implemented.

Policy implementation in areas where the president showed strong commitment is quite different from the implementation of policies which do not elicit the president's attention. The existence of strong commitments by the president will determine the degree of the policy's goal achievement. The more strongly committed the president is to the policy under implementation, the more effective the implementation process will be.

The main reasons for this are: (i) strong dedication can enhance the clarity, coherence, and saliency of policy problems, leading to a well-structured policy mandates; (ii) strong presidential commitment can alter and modify the critical inputs in the implementation of policy; (iii) strong commitment facilitates the smooth implementation process; (iv) strong commitment can resolve innumerable obstacles and problems encountered during implementation; and (v) strong commitment enhances forceful ideological devotion in attaining policy objectives.<sup>19)</sup> In short, when strong presidential commitment is present, the content of policy mandates will be well-structured and the policy context in which the policy is implemented will be more settled.

The above argument is applicable to policy implementation during the Park regime. Good examples are: most economic development policies, the Saemaul Movement (or New Village Movement), and the Green Revolution for self-sufficiency of rice. The next section will discuss the policy implementation of the Green Revolution, a policy which received President Park's strong commitment. This case exemplifies not only how strong presidential commitments influence both the policy content and policy context, but also demonstrates how much more effectively this policy will be implemented compared to others.

**<Table 1>** Food Consumption, Production and Import, 1961-73 (in thousand of metric tons)

Year	Consumption	Production	Imports	Self Sufficiency
1961	5,463	4,993	536	91.4%
1962	5,976	5,429	482	90.8
1963	6,138	4,637	1,223	75.5
1964	6,408	5,996	84	93.6
1965	7,313	6,864	634	93.9
1966	7,089	6,715	524	94.7
1967	8,014	6,947	1,100	86.7
1968	7,976	6,486	1,496	81.3
1969	8,573	6,307	2,389	73.6
1970	8,820	7,097	2,115	80.5
1971	9,856	6,842	2,883	69.4
1972	9,626	6,807	3,210	70.7
1973	9,715	6,538	3,249	67.3

Source: *Nongchon Such'op, 1977 (Handbook of Agricultural Policy)* (Seoul: Ministry of Agriculture and Fisheries, 1977), pp.66-67

#### **IV. Implementation of the Green Revolution Policy**

The high-yielding rice variety development and diffusion policy, also labeled the "Green Revolution" or "self-sufficiency rice policy," was inaugurated and implemented during the 1970s. This policy is a good exemplar of the traditional style of Korea's policy implementation process. It is an interesting case for the present research because of President Park's strong and continued commitment to the self-sufficiency of rice, which had an impact upon the process of its implementation. This case also provides an opportunity to illumination. This case also provides an opportunity to illuminate what the typical aspects of policy implementation are under a well-structured policy content and a settled policy context.

##### **1. Food Situation Prior to the Green Revolution in Korea**

South Korea is a country that is poorly endowed agriculturally. The land is mountainous, except in the southwest, so only about one-fifth of the area is cultivatable. In spite of the meager resources of the land, agriculture traditionally has been the population's lifeline.

Despite its steady growth, food production has been lagging behind the rapid increase in consumption <Table 1>. South Korea has been a food deficit country



**<Table 2> Rice Consumption Versus Domestic Production, 1961-73 (1,000 MT)**

Year	Domestic Production (A)	Total Production(B)	A/B %
1961	3,047	3,062	99.5
1962	3,463	3,407	101.6
1963	3,015	3,136	96.1
1964	3,758	3,709	101.3
1965	3,954	3,925	100.7
1966	3,501	3,532	99.1
1967	3,919	3,954	99.1
1968	3,603	3,822	94.3
1969	3,195	3,946	81.0
1970	4,090	4,394	93.1
1971	3,939	4,777	82.5

Source: *Nongchon Such'op (Handbook on Agricultural Policy)* (Seoul: Ministry of Agricultural and Fisheries, 1977), pp.66-73

since the early 1960s. For example, the total consumption of rice increased from 3,501,000 metric tons in 1967 to 3,919,000 metric tons, while domestic supply increased from 3,532,000 to 3,954,000 metric tons, respectively (Table 2). Imports filled the gap. During the same period, population grew from 25,498,000 to 33,459,000, an average annual growth rate of about 2.1 percent. The Korean Government has made various efforts in the past decades to increase food grain production. Nevertheless, the gap between supply and demand has been widening since the mid-1960s.

The Green Revolution policy was launched by President Park in 1972, and the policy goal of rice self-sufficiency was achieved in 1975. This study of the Green Revolution will focus mainly on the implementation process occurring from 1972 to 1978. After the assassination of President Park in 1979, governmental attention to the Green Revolution declined. The following sections will first describe the policy performance of the Green Revolution and then demonstrate how and why the policy goals of self-sufficiency were achieved through policy implementation.

## **2. The Green Revolution and Its Policy Performance**

The meaning of "Green Revolution" can have two connotations. One refers to a "broad transformation" of the agricultural sector with a reduction of food shortages within developing countries. Another denotes a "specific plant improvement", for example, the development of high yielding varieties of rice or wheat.<sup>20)</sup> In Korea, both meanings of the Green Revolution are applicable.

**<Table 3>** Rice Consumption Versus Domestic Production (1972-1978)

(Unit: 1,000 MT)

Year	Domestic Production (A)	Total Requirement (B)	A/B
1972	3,997	4,362	91.6
1973	3,957	4,296	92.1
1974	4,212	4,641	90.8
1975	4,445	4,422	100.5
1976	4,669	4,537	102.9
1977	6,006	5,715	105.1
1978	5,797	5,490	105.6

Source: *Nongchon Such'op* (Seoul: Ministry of Agriculture and Fisheries, 1979)

The main impetus of the Green Revolution came from President Park Chung-Hee's personal and strong commitment to the project.<sup>21)</sup> The style of this policy is very similar to the economic development policies and the Saemaoul Undong (or The New Village Movement) of the 1970s. The main characteristics of these policies were clear and coherent national goals and program objectives, and administrative timetables. These criteria were articulated by the president and his key aides and adopted by those bureaucratic agents responsible for policy implementation.<sup>22)</sup>

The Korean Government's campaign to diffuse a new high-yielding rice variety was launched in 1972. The new variety, called *Tongil*<sup>23)</sup> (Tongil means "unification" in Korean) was produced by a cooperative rice breeding project between the Office of Rural Development [ORD] and the International Rice Research Institute [IRRI].

The main reason that the Park Administration introduced the Green Revolution policy through a new high-yielding rice variety can be explained from the interplay of economic and political forces: (i) widening food gap; (ii) an increasing foreign exchange expenditure on food imports; and (iii) a growing income disparity between urban and rural households.<sup>24)</sup> To the Park Administration, the way to resolve the above predicaments was to reformulate rice policy, focusing mainly on the rapid achievement of an increased production of rice. This was accomplished through the promotion of high-yielding rice varieties planted in large acreage. The Korean government attained the goal of self-sufficiency in 1975 <Table 3>. The Tongil variety yielded an average 25-30 percent more than traditional varieties when proper care and procedures were adopted in planting. Consequently, the rate of self-sufficiency in food, although declining further to 69.4 percent in 1971 and 67.3 percent in 1973, had rebounded to the level of about 75 percent by the mid-1970s.

<Table 3, 4> indicates the trends in new variety acreage and yield. How did the Park Administration attain the goal of self-sufficiency and why? This question is the main focus of subsequent sections.

&lt;Table 4&gt; Rice Variety and Production Data (1970-1978)

Year	Yield Comparisons			Total Production (Million MT)
	Tongil Adoption (% Acreage)	Tongils (MT/ha)	Traditional (MT/ha)	
1970	0	—	3.3	3.94
1971	0	—	3.4	4.00
1972	16	3.9	3.2	3.98
1973	10	4.8	3.4	4.23
1974	15	4.7	3.5	4.42
1975	23	5.0	3.5	4.63
1976	44	4.8	4.0	5.18
1977	54	5.5	4.2	5.97
1978	85	4.9	4.4	5.78

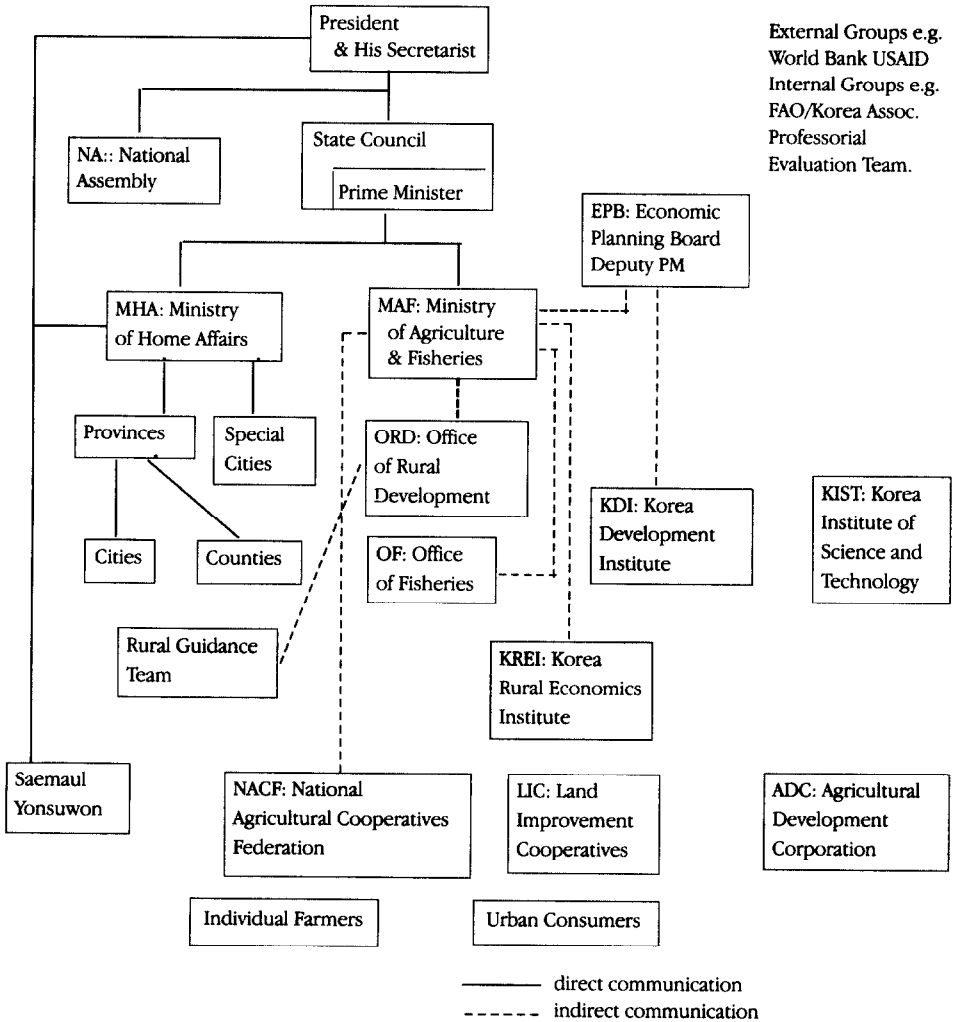
Source: Larry L. Burmester, *Research, Realpolitik, and Development in Korea: The State and the Green Revolution* (Boulder: Westview Press, 1988), p.61

## V. Policy Content and Policy Context of the Green Revolution

Most domestic and foreign scholars interested in Korea's Green Revolution argue that this remarkable accomplishment was achieved not only from the technological innovations associated with the new high-yielding seed developed by agrobureaucrats, but was due to the "relentless government pressure" imposed through field manipulation and command. These measures mobilized the farm population to implement the Green Revolution Policy.<sup>25)</sup> For a systematic analysis of the implementation process of the Green Revolution the policy formulation process, policy content, and policy context must be analyzed.

### 1. Policy Formulation of the Green Revolution Policy

In general, the major actors involved in policymaking in Korea are the executive, the legislature, and the political parties. Among them, the executive is the most important body for policymaking. This body includes the President, the presidential staff, the Prime Minister, the intelligence agencies, and the ministries. The authority relationship among the key actors is very hierarchical. A main feature of policymaking in Korea is that "the preferences and moods" of the top decision-makers are very important decision levers for most policies. Most decisions, except technology policy, are made by a "personalized" choice instead of rationally calculated one.<sup>26)</sup> The policy formulation of the Green Revolution is not vastly different from ordinary



Source: Young Whan Kihl and Dong Suh Bark, "Food Policies in a Rapidly Developing Country: The Case of South Korea, 1960-1978," *The Journal of Developing Areas* 18 (1981), p.56

**Figure 1.** Relevant Agencies Responsible for Food Policy Making and Implementation in Korea

patterns of policymaking processes in Korea. The authority for making rice policy, especially in the case of the Green Revolution, was consolidated in the hands of top executives of the central government.

Rapid economic development in the 1960s increased rural-urban income dispari-

ties. Opposition political parties began to campaign against these inequalities. The potential danger became apparent in the 1971 presidential election when Park lost the heavily agricultural southwestern provinces to Dae-Jung Kim.<sup>27)</sup> After the election, the issue of rice policy suddenly became an urgent political issue within Park Administration.<sup>28)</sup> President Park and his advisors began to strategically use the rice self-sufficiency policy for future political benefits. President Park repeatedly emphasized the importance of self-sufficiency of rice at the New Year's Press Interviews in 1971, 1972, and 1974.<sup>29)</sup> The policy making of the Green Revolution was formulated by executive elites at the center within the boundary of President Park's personal preference.

Three main governmental ministries formally responsible for rice policies were the Ministry of Agriculture and Fisheries [MAF], the Economic Planning Board, and the Ministry of Home Affairs.<sup>30)</sup> In addition, the government agencies at the subcabinet level dealing with rice policy making are the Office of Rural Development [ORD] and the National Agricultural Cooperative Federation [NACF] (see Figure 1). The direct influence of the farmers and their representative institution, the NACF, was minimal in the Green Revolution's policy formulation.

However, the policy positions of the three ministries, the ORD, the NACF, and the farmers was not represented in the formulation of the Green Revolution policy. For example, many ORD administrators and working scientists questioned the applicability of the new Tongil variety in Korea from three reasons; (i) the new varieties were sent to farmers' fields with minimal experimental testing; (ii) the genealogy of the new varieties made them vulnerable to Korean climatic variation; and (iii) widespread diffusion of one varietal type over a large area subjected the rice crop to increased risks of disease outbreaks.<sup>31)</sup> But, the goal of "rapid" self-sufficiency of rice by top executives overrode ORD scientists' three criticisms.

## **2. Well-Structured Policy Content**

The content of the Green Revolution policy is relatively well-structured. The structure of the policy content of the Green Revolution will be discussed in terms of its specificity, stringency, and tractability.

Most policy mandates of the Green Revolution were issued as the executive orders, administrative decrees, and president's special announcements. Government decisions on the policy were issued then as specific "policies" and "commands", which required the provincial and local governments down the hierarchy to faithfully implement them.<sup>32)</sup>

Following President Park's special announcement on the rapid self sufficiency of rice, the Planning Office of Rice Production was established within the Blue House. The Ministry of Agriculture and Fisheries [MAF] with the Planning Office of Rice

Production and the Office of Rural Development made long-and short-term goals of each year. The annual national goal of the Green Revolution policy was always clear and specific. These goals were designated as the acreage of Tongil varieties planted and the amount of rice production from Tongil planting.<sup>33)</sup> Within the boundary of the national goal, the MAF issued the sub-goals of each province to the governors.<sup>34)</sup>

But, the stipulated annual policy goals were always accompanied by rigid programmatic check and stringent administrative sanctions. Sometimes, local administrators, who did not achieve the given production goals, received administrative punishments such as demotion, deposition, or forced resignation. When farmers violated the policy mandates (e.g. when they resisted Tongil variety), some governmental benefits, such as farming loans and low-price artificial fertilizer, were eliminated.

The tractability of the policy problem to both farmers and consumers was problematic. The preferences of the executive body, farmers, and consumers were quite different. Farmers were often more concerned about their own consumption needs and maintaining stable yields. Also, many farmers complained about the poor taste of the Tongil varieties. They were not willing to voluntarily sacrifice the favored consumption pattern, the traditional japonica varieties, for higher yields.<sup>35)</sup>

Therefore, to overcome such resistances, the Korean government strategically used inducements such as increased fertilizer supply to the farmers and modification of the rice pricing system. These inducement systems worked well and increased the tractability of the self-sufficiency policy for farmers. Review of the strategy of inducement will be saved for a subsequent section.

### **3. Settled Policy Context**

The policy context in which the Green Revolution was implemented was relatively settled. It will be shown that, among others, the critical factor which settled the policy context necessary for effective implementation in the present case was President Park's strong commitment to the program.

This forceful and enduring commitment facilitated the smooth implementation of the program in a number of ways. First, President Park overcame some resistance to the policy by increasing critical administrative inputs. Second, he ordered suitable fund provision for purchasing both farming materials for Tongil seedlings and pesticides.<sup>36)</sup> He invented a new reward system for high-yielding farmers to overcome resistance from farmers.<sup>37)</sup> Third, President Park militated the strong ideological commitment of the local administrators to attain the goal of Green Revolution effectively. For example, President Park gave special bonuses to local expansion actors to reward them for their dedication in achieving rapid self-sufficiency of rice. These special bonuses raised the morale of local administrators.<sup>38)</sup>

Fourth, Park's strong dedication to the self-sufficiency policy solved many critical

obstacles and problems. He used symbolic force to enhance “collective emotions” in an effort to overcome numerous oppositions to the diffusion of Tongil varieties. Larry L. Burmeister succinctly points this out in the following:

Tongil means unification in Korean. If there is nay overriding political theme in South Korea’s postwar history, it is a steadfast commitment to the ideal of the eventual reunification of the two Koreas. The symbolic force of this idea is powerful enough to legitimate various draconian measures taken in the name of eventual reunification by regimes in both the North and the South. The South Korea state effectively played on these collective emotions in its attempt to meet rice production targets.<sup>39)</sup>

But, more importantly, Park’s strong commitment to the Green Revolution resolved crucial obstacles that occurred during policy implementation. The govern-

<Table 5> The Number of Broadcasts on Tongil Varieties and Their Production (1972-1977)

<u>Radio</u>							(Unit: Number)
Year	Broadcasting Station					Total	
	KBS	MBD	TBD	DBS	DBS		
1972	539	157	274	189	17	1,176	
1973	692	149	285	191	24	1,341	
1974	506	135	279	182	21	1,123	
1975	457	180	272	172	22	1,103	
1976	737	147	299	202	25	1,410	
1977	558	178	225	201	24	1,186	
Total	4,184	1,097	1,845	1,287	159	8,572	

<u>TV</u>					(Unit: Number)
Year	Broadcasting Station			Total	
	KBS	MBC	TBC		
1972	57	—	—	57	
1973	58	—	—	58	
1974	45	—	1	46	
1975	69	2	6	77	
1976	51	2	11	64	
1977	68	4	10	82	
Total	361	8	27	396	

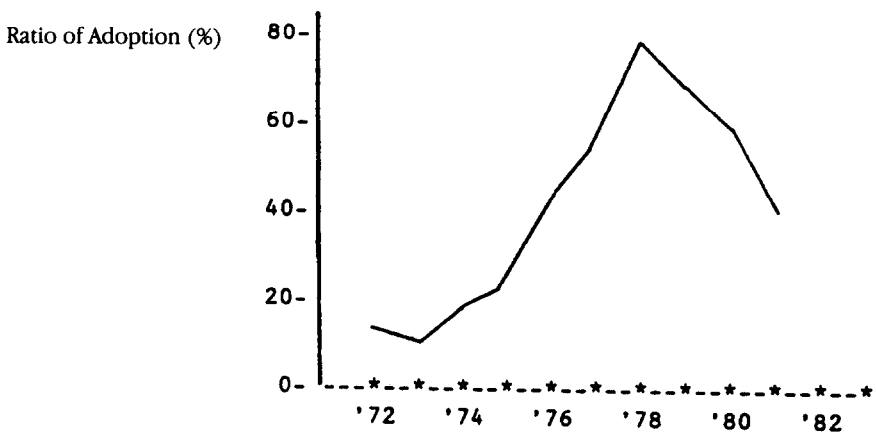
Source: In-Hwan Kim, *Hankook ui Noksek Hyukmyong* (Suwon: The Office of Rural Development, 1978), pp. 185-186

ment supplied fertilizer which coaxed compliance and then manipulated the rice-price structure which guaranteed economic profits for those planting the Tongil varieties. The two strategies will be discussed in more detail in next section.

The saliency of the Green Revolution to both local implementors and farmers was relatively high. The Korean government manipulated media broadcasts with the aim of making the Green Revolution prominent to farmers. Radio and T.V broadcasts were mobilized to explain the merits of Tongil varieties, report good production, and to educate farmers.

The general environmental condition for the implementation of the Green revolution was relatively stable from the inauguration of the policy in 1972 to 1978, except for climatic problems. As I previously pointed out, some doubts on the fitness between the Tongil varieties and the Korean climate was present during the policy formulation process. This controversy was never resolved during the implementation phase of the policy. Fortunately during this time period, Korea had not experienced abnormal climatic situations that could have damaged the production of Tongil varieties.

However, the progress of the self-sufficiency policy was halted because of a serious nationwide blight outbreak (Do-Yeoul Byung) among the widely disseminated Tongils<sup>40</sup>) (See Table 4). In 1979, the problem of a long period of windy, rainy, and chilly days seriously impaired Tongil varieties and precipitated a serious production shortfall.<sup>41</sup>) Moreover, the assassination of President Park in 1979 was a critical politi-



Source: Yong-Chie Park, "*Hyuksbin ui Hwaksankwajeong: Dasuwbak Pumjong ui Hwaksank wajeong Bunsuk*," (Diffusion of Innovation: An Analysis of Diffusion Process of High-Yielding Varieties on Korea) (Seoul: Ph.D Diss. Seoul national University), p. 122

**Figure 2.** The Process of Diffusion of the High-Yield Varieties



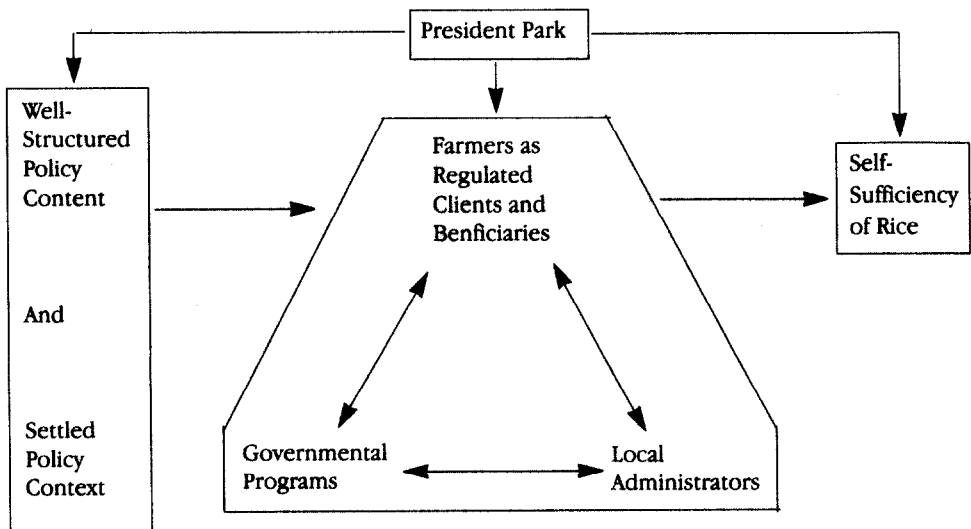
cal event which seriously impaired the performance of the Green Revolution. Shortly thereafter, the Fifth Republic of Korea adopted a new rice policy which let farmers select their own varieties (See Figure 2).

## VI. The Process of the Implementation of the Green Revolution Policy

Under the well-structured policy content and settled policy context, how was the implementation process of the Green Revolution policy organized, and what is the peculiar aspects of this process? First of all, key actors, especially those in local areas, and their strategies will be identified. Then, the complex interactions among these actors and governmental programs will be discussed.

### 1. Key Actors and Their Roles in Policy Implementation

There are numerous relevant actors in the implementation of the Green Revolution policy (See Figure 3). Among them, the President and the Ministry of Agriculture and Fisheries, the Ministry of Home Affairs, which is an institution for the enforcement of the policy directives issued by the central government, local governmental actors (in the provincial government, city, county [KUN] and sub-county [Myon]), and the farmers are key actors during the implementation of the Green Revolution policy. Figure 3 shows the interactions among key actors.



**Figure 3.** Interaction among Key Actors and Governmental Programs in the Implementation of Green Revolution

## **2. The Role of the President in the Implementation of the Green Revolution**

In earlier sections, the role of president Park in policy formulation and policy implementation was discussed. Additionally, Park modified or changed the direction of implementation of the Green Revolution. Park frequently visited showcase villages that produced high production of Tongil varieties to encourage the rapid achievement of self-sufficiency of rice. During these ceremonial visits, President Park sometimes ordered the alteration of some policy implementation details. During his inspection tours of villages, he pointed out various implementation problems. Subsequently, the direction of policy implementation was modified. Kihl and Bark's (1981) long statement actually describes President Park's role in the implementation of the Green Revolution.

Numerous instances may be cited where policy implementation was altered by presidential order, following one of his inspection tours or meetings with government officials or civic leaders arranged by the president's secretariat office. For instance, the president conducts an annual beginning-of-the-year tour of the ministries of the executive department. Some modification of farm and food policy implementation can result from such presidential visits to the ministry concerned and the briefings which he receives from the officials of the ministry. He also meets periodically with various civic and business leaders during his office hours in Seoul or during his frequent inspection tours of the countryside. These often impromptu and whimsical situations may provide an occasion for modifying or reinforcing the implementation of national politics, including the ones on food and agricultural development.<sup>42)</sup>

## **3. The Dominant Role of the Ministry of Home Affairs in Local Implementation of the Green Revolution**

Decisions about the implementation of the Green Revolution were not the results of political competition among various autonomous actors in the local level. Instead, the commands came directly from the central government. This type of decision making process exhibits a "command system" which reflect the will and desire of the leadership in a chain of command.<sup>43)</sup> In this type of system, decisions about the use of highyielding rice varieties were rarely subjected to bargaining and negotiation among independent actors. Although farmers' participation frequently occurred in specific rural development projects, the principal locus of implementation direction at the national level were the top political elites and their technocratic staff.

Ever since the early 1960's nationwide modernization push, there has been an increasing tendency for the central government to "restrict" the autonomy of the local government. This led to the "efficient" control of local administration by the central government.<sup>44)</sup> Therefore, local government in Korea were created by the

central authorities and then charged with the "administration" of the policies and programs initiated by the central government. Thus, the central government exercised a broad power of control and command over the functional operations of the local governments at various levels.

Local governmental agencies, during the implementation of the Green Revolution, were also tightly integrated into a highly centralized bureaucratic administrative system directed from central government. Local governmental agencies have very little authority or initiative, most of which were delegated by the central government.

In most cases, a peculiar institutional arrangement in policy implementation in the local areas was the existence of the Ministry of Home Affairs [MHA] which dominated local implementation. There was no system of local autonomy or self-rule to implement policies in most cases in Korea. Therefore, the MHA was the executive arm of the central government in charge of policy implementation in the Green Revolution by virtue of its jurisdiction over the local and provincial administrative systems.

Three main vehicles by which the MHA exercised its dominant influence over the local implementation of the Green Revolution were the appointment power, the budget power, and the oversight power. The power to appoint provincial governors, mayors, chiefs and many other important local officials belonged to the MHA. Therefore, local actors operated under the direction of the MHA's Bureau of Local Administration. The MHA also has the prerogative to overhaul the budget and oversee the accounting, auditing, tax collection and disbursement aspects of local administrations.<sup>45)</sup> Although the Ministry of Agriculture and Fisheries [MAF] had jurisdiction over the Green Revolution, the MHA exercised great influence on the local implementation of the Green Revolution. Thus, the implementation of the Green Revolution was carried out by the provincial governors who were responsible to MHA, not to MAF.<sup>46)</sup> Indeed, the MHA had been "the central supervising organ" for the organization and function of the nation's local government machinery.

#### **4. The Administrative Behavior of Local Actors**

The nature of the institutional arrangements in the local areas for the implementation of the Green Revolution policy influenced the behaviors of local administrators. The local administrators had taken on two roles simultaneously: an extension-agent and an enforcement-agent. The extension agent role included the technical education of farmers, dissemination of propaganda about the new high-yielding seed varieties, and distribution of facilities for better farming. As an enforcement agent, the administrator's role was to control the preferences of farmers on the rice varieties and to regulate the behavior of farmers, insuring compliance with the policy mandates of the Green Revolution formulated by the central government.

The extension role was responsible to the Office of Rural Development [ORD] which is attached organizationally to the MAF but directly supervised by the governor.<sup>47)</sup> The ORD performs its extension works through the Rural Guidance Office [RGO].<sup>48)</sup> The Rural Guidance workers were in “frequent” and “direct” contact with the farmers, and as a result they were usually more aware of local problems and attitudes than most other officials. Especially in the earlier period of the Green Revolution (1972-1973), the role of Rural Guidance workers contributed to the diffusion of the Tongil varieties.

The main and commonly used strategy for persuading or convincing farmers was periodical propaganda, education, training, and visiting the individual farm households. A good example of this strategy was shown in Kim’s *The Green Revolution in Korea*: “in Sinan-gun, Jeonnam-do guidance workers persuaded farmers to plant Tongil under the slogan of ‘Visit Farmers Ten Times.’”<sup>49)</sup>

Sometimes, farmers accepted the recommendation on the Tongil varieties to “save the guidance workers’ ‘face’.”<sup>50)</sup> This mode of reaching agreement by persuading the resistant farmers into consent is apparently a peculiar feature of social interactions in Korean rural areas. However, the role of extension through education and persuasion is time-consuming work. The guidance workers could not produce immediate compliance through these indirect strategies. Sometimes, they were sanctioned or demoted because of their poor performance.

Because local governmental agencies in Korea were tightly integrated into a highly centralized bureaucratic administrative system, there was little initiatives or discretion for local rice policy. The central government always exerted “great pressures on local administrators to produce immediate dramatic and concrete results”<sup>51)</sup> in local areas for rapid achievement of policy goals. As a result, to fulfill the predetermined Tongil planting acreage, most local actors tried to find ways of handling pressures from the central government. In addition to the extension role, most rural guidance workers adopted the enforcement role for showing immediate performance. From 1974 onward, both the rural guidance workers and regular local administrators (of the MHA) began to use more heavy-handed and illegitimate administrative measures. A good example of the heavy-handed measures was that guidance workers and other local administrators sometimes physically destroyed traditional variety seedbeds.<sup>52)</sup> The reason for this coercion was mainly derived from “the excessive bureaucratic zeal” to show immediate results. Sometimes, local officials tried to concentrate on “showcase projects” in villages to demonstrate superior authorities the success of their efforts.<sup>53)</sup> Some local administrators even made false administrative reports on the Tongil seeding acreage to superior authority to avoid administrative sanctions.<sup>54)</sup>

### 5. Farmers as Regulated Clients and Program Beneficiaries

Until very recently, Korean farmers were the least influential social group in the policymaking process. Thus, the participation of farmers in grass roots movements to affect the policymaking process has been minimal. Traditionally, an institution that could represent the farmer's interests was the National Agricultural Cooperation Federation [NACF]. But, the NACF had no authority to participate in the policymaking process of the Green Revolution.<sup>55)</sup> The NACF was also a centrally directed bureaucracy where local members had no voice in determining policies or implementation.<sup>56)</sup>

Thus, the interests and opinions of farmers were represented through periodical visits by local administrators or winter training programs in the countryside. Only through indirect and unsystematic channels, farmers' opinions were expressed and considered in future discussion about varietal development and self-sufficiency policies. But, it was a very rare case when the opinions of farmers were systematically and formally feedback into the policymaking process.<sup>57)</sup>

Rice is the very heart of the Korean diet. Traditionally, farmers preferred cultivating good-taste rice varieties with stable yield to malign taste with high yield. Most consumers in urban areas also preferred good tasting rice with a relatively high price to bad tasting Tongil with a low price. To the Park Administration, the interest conflicts between farmers and the government was a serious obstacle to the rapid achievement of Green Revolution. As pointed out earlier, education and persuasion of farmers were long-term and indirect strategies. Instead of these tactics, the Korean government chose direct and coercive intervention mechanism to redirect the preference of farmers (i.e., farmers as regulated clients).

However, coercive administrative intervention could not overcome interest conflicts between the farmers and the government. Two things still remained as obstacles to the compliance of farmers, a favorable price system and guaranteed markets for Tongil varieties. At last, the Korean government constructed "exchange

<Table 6> Rice Variety and Production (1973-1977) (kg/ha)

Year	Tongils (A)	Tradition (B)	Ratio (A/B)
1973	481	349	1.378
1974	473	353	1.340
1975	503	351	1.430
1976	476	396	1.210
1977	553	423	1.370

Source: Young-Chie Park, op. cit., p. 114 (footnote 72)

&lt;Table 7&gt; Income and Expenditure of Farm Households

(Unit: Won)			
Year	Income	Expenditure	Surplus
1972	429,394	255,233	103,201
1973	480,711	326,193	123,201
1974	674,451	357,567	219,071
1975	872,933	455,380	226,931
1976	1,156,254	646,002	367,885
1977	1,432,809	788,369	400,826
1978	1,884,194	1,031,983	484,701

Source: The Ministry of Agriculture and Fisheries, 1979

&lt;Table 8&gt; Ratio of Rural Household Income to Urban Households Income (1970-1977)

(Unit: Won)			
Year	Average Monthly Income of Urban Wage Earner Household (A)	Average Monthly Income of Farm Household (B)	B/A (%)
1970	31,770	21,317	67.1
1971	37,660	29,699	78.9
1972	43,000	35,783	83.0
1973	45,850	40,059	87.4
1974	53,000	56,204	104.6
1975	71,000	72,744	101.6
1976	95,000	96,355	100.4
1977	117,090	119,401	102.0

Source: The Ministry of Agricultural and Fisheries, 1978  
The Economic Planning Board, 1978

networks<sup>58)</sup> for barter the compliance of farmers to the rapid self-sufficiency policy with governmental benefits to the farmers.

There have been debates on whether the Green Revolution policy really intended to give benefits to farmers.<sup>59)</sup> But, from a short-term perspective, farmers who cultivated Tongil varieties were rewarded with profits for their compliance in many ways. First, the production rate of Tongil was higher than traditional varieties. <Table 6> .

Second, the Korean government provided artificial fertilizer at low price to farmers, and modified the current rice pricing system to assure profits of Tongil planting. (The next section will discuss more specifically the rice pricing system.) Third, farm households' income increased during the Green Revolution <Table 7> .

Fourth, the income discrepancies between rural and urban areas prior to the Green Revolution decreased. From 1974 onward, the average monthly income of farm households increased in comparison to the average monthly income of an urban wage earner household (Table 8). However, whether the increased income surplus of rural areas can be attributed to the Green Revolution is not a simple question to answer. But, according to one study, the main reason for income increase could be attributed to the cultivation of Tongil varieties and their high production.<sup>60)</sup>

## 6. Governmental Programs

To achieve rice self-sufficiency rapidly, the Park Administration needed to resolve the problem of low compliance from both farmers and local administrators. To farmers, the Korean government provided material, financial, and economic inducements. To local administrators, the central government issued a new system of administrative rewards. Therefore, these "carrots" became balanced against the "stick" of policy mandates.

**Administrative Rewards and Punishment;**<sup>61)</sup> In Korea, most lower level local administrators and rural guidance officials have suffered from low pay and the lack of promotion opportunities.<sup>62)</sup> They have also suffered from "official" and "informal" pressures exerted from above, beside, and within. Not only should they accomplish the goals of the Green Revolution, but they need also to consider the actual priorities of their direct superiors. In Korea, the informal priorities are effective constraints on subordinates who are concerned with their future promotion in the organization. Or more simply, just to keep in line with their superiors.<sup>63)</sup> Moreover, local administrators have to cope with which those day-to-day pressures stemming from the execution of their jobs and their relationship with peers and clients.<sup>64)</sup>

In addition to the above pressures, local administrators had overburdened workloads. The rapid achievement of self-sufficiency of rice led the central government to direct regional Tongil planting quotas. Sometimes, the directed quotas were higher than the locals' feasible capacity.<sup>65)</sup> These directed acreage targets were none-the-less taken seriously by the local administrators because their career prospects depended on satisfactory performance.<sup>66)</sup> To achieve the administrative quota, the central government urged hardship upon local administrators without an extra allowance or promotion opportunities to compensate for such burdens. As a results, the turnover rate of rural administrators, especially rural guidance agents, increased.<sup>67)</sup>

To encourage local performance of the Green Revolution, the Korean government devised three administrative measures mixing "carrots" and "sticks." First, higher bureaucrats of the central government periodically visited villages encouraging local administrators.<sup>68)</sup> Second, a reward systems such as 200 percent bonus or official commendation to local administrators in higher performing villages was introduced to

encourage continued dedication to the Green Revolution.<sup>69)</sup> Third, the Korean government exercised strong administrative measures for poor performance.<sup>70)</sup> These three measures contributed to inducing further hardship of local administrators for immediate performance of Tongil production. However, the administrative measures also caused excessive bureaucratic zeal and phony overfulfillment of plans.

**Financial Aids to Farmers for Compliance:** One problem of planting Tongil high yielding varieties was the relatively higher cost of cultivating Tongil varieties than traditional varieties. Because of the higher costs, most farmers avoided governmental directions on Tongil planting. Thus, the Korean government used financial aid as an instrument to increase compliance from some resistant farmers.

The Korean government rewarded Tongil adopters with timely, assured fertilizer supplies, pesticides, and other facilities.<sup>71)</sup> Coercive measures were also taken through the disbursement of farming loans. In order to receive the loan, farmers have to promise to adopt Tongil varieties. Sometimes, the loan contracts were cancelled by local administrators simply because farmers did not seed Tongil varieties.

**Price Support Policy and Assurance of Good Profits:** Tongil varieties had notable economic drawbacks because of their low market price. As previously mentioned, the price of rice was generally determined by its taste. Consumer resistance to the bad taste of Tongil high-yielding varieties posed marketing problems. Therefore, the Korean government had to overcome price differences between Tongil and traditional varieties to assure the profits for the Tongil adopters.

<Table 9> Rice Prices (1970-1979)

(unit: Won/80kg)

Year	Government Purchase Price (A)	Market Price (B)
1970	5,150	5,400
1971	7,000	6,500
1972	8,750	9,500
1973	9,888	9,500
1974	11,377	11,264
1975	15,760	13,000
1976	19,500	16,730
1977	23,200	19,500
1978	26,000	22,420
1979	30,000	26,500

Source: Jung-Ung Kim and Kuang-Pyun Choi, *National Budget and Policy Goal, Study Report 84-03* (Seoul: The Office of Korean Development Study, 1984), p. 324; The Ministry of Agriculture and Fisheries, 1980



**<Table 10>** . Marketing of Rice Through Government Channels (1970-1977)

Year	Percent	Year	Percent
1970	.09	1971	.13
1972	.13	1973	.12
1974	.17	1975	.17
1976	.20	1977	.23

Source: National Agricultural Cooperatives Federation (various years)

In Korea, the pricing structure and marketing channel of rice is mostly controlled by government. To maintain the income balance between rural and urban households, the government adopted a dual-price policy in 1968.<sup>72)</sup> It purchased rice from farmers at high prices and sold to consumers at lower prices. Through price supports, the government attempted to increase the farmers' income and stabilize prices for consumers.<sup>73)</sup>

The dual-price policy was structured to favor traditional varieties. For example, estimates of the traditional variety premiums cluster around the 10-15% range.<sup>74)</sup> In order to overcome farmers' resistance to Tongil varieties, the Korean government guaranteed a market for Tongil production through modification of the dual-price structure. The government purchased an increased amount of Tongil rice with a higher price than before <Table9> . And, the Korean government's purchases increased from 12% of the rice crop in 1972 to 23% in 1977 <Table 10>.<sup>75)</sup>

## **VII. Conclusion: Controlled Implementation and Its Problems**

The Green Revolution in Korea from 1972 to 1978 led to successful achievement of rice self-sufficiency within a short time period. The Green Revolution in Korea from 1972 to 1978 led to successful achievement of rice self-sufficiency within a short time period. The case of the Green Revolution is typical of policy implementation in the 1970s under the authoritarian regime. In the 1970s, in addition to the Green Revolution, the goals of the government's nationwide policies, such as economic development and New Village Movement, had also been achieved. The main characteristics of these policies were clear and coherent national goals and program objectives, and rigid administrative timetables for their achievement. These national goals and administrative objectives were articulated by the president and his key staffs and faithfully adopted by those bureaucratic agents responsible for policy implementation.

The content of policy mandates for the Green Revolution was clear and coherent. The annual goal of the Tongil planting acreage and the amount of production were

sent to every province as the administrative quotas. Moreover, President Park's special announcements, and some administrative directives which were ordered during his annual visits and inspection visits to rural areas, also strengthened the content of policy mandates. Program oversight was very stringent. Poor performance was punished by administrative sanctions such as demotion and coercive designation regardless of local situations.

The policy context of the Green Revolution was settled by the strategic manipulation of administrative sticks and carrots. Various compulsive and coercive administrative measures against the resistant farmers were used to coax them. Various material, economic, and financial inducements were provided to increase the compliance of the farmers.

During the implementation of the Green Revolution, one critical factor for effective implementation was the role of the president. His strong commitment to the rapid rice self-sufficiency could alter some critical inputs, resolve innumerable obstacles, and enhance forceful ideological devotion in attaining policy goals. The strong commitment and president Park's direct involvement in the implementation process could facilitate the smooth implementation process of the Green Revolution.

As the policy implementation of the Green Revolution shows, a typical characteristic of policy implementation under well-structured policy content and settled policy-context is controlled implementation style.<sup>76)</sup> It is a directed, forced, and "programmed"<sup>77)</sup> policy implementation. It is a typical style of the top-down implementation.

In fact, the choice of a rice variety must be dependent upon the farmers' preference, local economic situation, and local environmental situations such as soil condition and climatic condition. These conditions were totally ignored in favor of the rapid achievement of the Green Revolution. The interests of farmers were always blocked-off both in the formulation and the implementation process. "Mutual adaptation"<sup>78)</sup> between policy goals and local conditions was extremely limited. Moreover, local initiatives and local discretion were minimal local administrators complied to directed policy mandates. They had to go "by the book"<sup>79)</sup> that was issued by the central government. Burmeister clearly points out the controlled implementation style of Green Revolution when he states:

The story of the Korean Green Revolution reveals a developmental state whose top policymakers decide how agricultural-sector targets are to be met and have policy and organizational instruments at their disposal to carry out their programs even if these programs are at odds with the preferences of important societal interests.<sup>80)</sup>

However, in real situations, policy implementation under the well-structured policy content and settled policy context is very rare. The controlled implementation style is limited to very simple policy issues or very coercive policies such as a tax pol-

icy, or very "sound"<sup>81)</sup> policy. Why was the Green Revolution policy successfully implemented by the controlled implementation style? As previously pointed out, President Park's strong policy commitments could control the "weak" agricultural sector in Korea.<sup>82)</sup> Rural farmer in the 1970s were the least influential social group in Korea.

The role of strong political supports from top decision makers or "fixers" is well articulated in the literature of policy implementation.<sup>83)</sup> The role of strong political supports for the effective policy implementation is more applicable to authoritarian developing countries than democratic countries. The "political penetrability"<sup>84)</sup> of the policy which attract presidential attention is inverse to the level of socioeconomic development. Furthermore, because Korean farmers were the least influential social group in Korea, once the Green Revolution policy was implemented, the "social penetrability"<sup>85)</sup> of the policy to the agricultural sector was relatively high. Thus, the goal of rapid rice self-sufficiency was more likely to be attained.

However, Korea began to experience democratization after the mid-1980s, "the political penetrability" and "social penetrability" of public policies had been reduced. As a result, the controlled implementation style through strong presidential commitment began to reveal its limitation.

As democratization developed in Korea, not only did the policy contexts which were considered settled become unsettled, policy content which were considered well-structured became ill-structured through the growing conflictual representation of political interests by expanded participation. A most serious implementation failure in Korea will be derived from the adoption of a controlled implementation style even when the nature of the policy content and context are changing in such a way that they no longer are applicable to the controlled implementation style. In the era of political democratization, the frequent use of the controlled implementation style will cause implementation crisis in Korea.

Given this, the important tools of effective implementation will be changed from the programmed and coercive political control to the more frequent uses of compromise, bargaining, inducements, and discretion. In a new era of democratization in Korea, the process of policy implementation will become diverse, and the use of a controlled implementation style will give way to the compromised implementation which adopts pluralistic interest group politics in policy implementation.

## Notes

- 1) Ripley and Franklin comment on the lack of knowledge on the implementation in other countries.

"whether implementation as we have portrayed it in the United States is unique or whether, in fact, there are major similarities in other societies. We simply don't know, primarily

because there has been virtually no attention paid to implementation outside of the United States.”

Randall B. Ripley and Grace A. Franklin, *Policy Implementation and bureaucracy* (Homewood: The Dorsey Press, 1982) (1st. ed.), p. 207.

- 2) Steven Kelman, *Regulating America, Regulating Sweden: A Comparative study of occupational Safety and Health Policy* (Cambridge: MIT Press, 1982); Paul B. Downing and Kenneth Hanf (eds.), *International Comparisons in Implementation Pollution Laws* (Boston: Kluwer-Nijhoff Publishing, 1983); Kenneth Hanf and Theo A.J. Toonen, *Policy Implementation in Federal and Unitary Systems: Questions of Analysis and Design* (Dordrecht: Martinus Nijhoff Publishers, 1985); David Lewis and Helen Wallace (eds.), *Policies Into Practices: National and International Case Studies in Implementation* (London: Heinemann Educational Books, 1984); David Vogel, *National Styles of Regulation: Environmental Policy in Great Britain and The United States* (Ithaca: Cornell University Press, 1986).
- 3) Thomas B. Smith, “The Policy Implementation Process,” *Policy Sciences* 4(1973), 197-209; Gabriel U. Iglesias (ed.), *Implementation: The Problem of Achieving Results* (Manila: Eastern Regional Organization for Public Administration, 1976); Marilee S. Grindle (ed.), *Politics and Policy Implementation in the Third World* (Princeton: Princeton University Press, 1980); Donald P. Warwick, *Bitter Pills; Population Policies and Their Implementation in Eight Developing Countries* (Cambridge: Cambridge University Press, 1982); G.S. Cheema and E. Rondinelli (eds.), *Decentralization and Development: Policy Implementation in Developing Countries* (Beverly Hills: Sage Publications, 1983); Jon S.T. Quah (ed.), “Public Bureaucracy and Policy Implementation in Asia,” *Southeast Asian Journal of Social Science* 5(1987), no.2; David M. Lampton (ed.), *Policy Implementation in Post-Mao China* (Berkeley: University of California Press, 1987); Merilee S. Grindle and John W. Thomas, *Public Choice and Policy Change: The Political Economy of Reform in Developing Countries* (Baltimore: The Johns Hopkins Univ. Press, 1991).
- 4) See Janice Love and Peter C. Sederberg, “Euphony and Cacophony in Policy Implementation: SCF and The Somali Refugee Problem.” *Policy Studies Review* 7(1987).
- 5) See Thomas B. Smith, *Op. cit.*; Gabriel U. Iglesias, “Introduction: Implementation and The Planning of Development: Notes on Trends and Issues, Focusing on the Concept of Administrative Capability,” Iglesias (ed.), *Op. cit.*, xv-xxxx.
- 6) Iglesias, *Op. cit.*, p. xxxiv.
- 7) For example: (i) weak coordination among governmental entities; (ii) poor budgeting and financial management; (iii) dearth of administrative leaders and technically competent personnel; (iv) duplication of planning functions; (v) low participation of implementors and field offices in planning; (vi) overcentralization; (vii) inadequate information base, poor reporting and feedback mechanism; and (viii) lack of commitment. See Iglesias, *Op. cit.*, p. xxv
- 8) More recently, a more broad perspective of policy implementation in developing countries has been appeared in the literature of comparative politics. It tries to understand policy implementation from the “statesociety” relations. For example, see Joel S. Migdal, *Strong Societies and Weak States; State-Society Relations and State Capabilities in the Third*

*World* (Princeton: Princeton University Press, 1988); Donal P. Warwick, *Op. cit.*

The same perspective is applied to policy implementation in France. See Ezra N. Suleman, *Private Power and Centralization in France: The Notaires and the States* (Princeton: Princeton University Press, 1987).

- 9) Merilee S. Grindle, "Policy Content and Context in Implementation," Grindle (ed.), *Op. cit.*
- 10) Grindle, *Op. cit.*, p. 3
- 11) Grindle, *Op. cit.*, p. 15.
- 12) See Aaron Wildavsky, "If Planning is Everything, Maybe It's Nothing," *Policy Science* 4 (1973).
- 13) Lery P. Jones and Il Sakong, *Government, Business, and Entrepreneurship in Economic Development: The Korean Case* (Cambridge; Harvard University Press, 1980), p. 79.
- 14) Jong-Youl Yoo, "Policy Processes in Developing Countries: The Case of the Republic of Korea," *International Social Science Journal* 108(1986), P. 242.
- 15) Jones and Sakong, *Op. cit.*, p. 63.
- 16) Someone might argue that the implementation process of this kind is similar with the perspective of "evolutionary" policy implementation or "implementation as learning." But, we must be cautious to determine whether these implementation in Korea is evolutionary or learning. In fact, the two perspectives mainly deal with how central policy mandates are adapted to local environments. Both are the results of not only complex interactions (most of them political) among policy mandates, political and social environment, and preferences of implementors at the local areas but also formal and reliable policy evaluation. But, Korean style of trial-and-error in policy implementation is a directed change of implementation directions, which is ordered from the upper executive levels.  
About evolutionary implementation and implementation as learning, see: Gianodomenico Majone and Aaron Wildavsky, "Implementation as Evolution," Jeffrey L. Pressman and Aaron Wildavsky, *Implementation* (Berkeley: University of California Press, 1984), pp. 163-180; Angela Browne and Aaron Wildavsky, "Implementation as Mutual Adaptation," Pressman and Wildavsky, *Op. cit.*, pp. 206-231.
- 17) Jong-Youl Yoo, *Op. cit.*, pp. 246-247.
- 18) Jong-Youl Yoo, *Op. cit.*, p. 247.
- 19) See Gabriel U. Iglesias, "Implementation and The Planning of Development: notes on Trends and Issues, Focusing on the Concept of Administrative Capacity," Iglesias (ed.), *Op. cit.*, pp. xv-xxxi.
- 20) Keith Griffin, *The Political Economy of Agrarian Change: An Essay on the Green Revolution* (2nd, ed.) (London: The Macmillan Press Ltd., 1979), p. 2.
- 21) About President Park's personal and strong commitment to the Green Revolution, See In-Hwan Kim, *Hankook ui Noksek Hyukmyong* (The Green Revolution in Korea) (Suwon: The Office of Rural Development, 1978) Other examples on the relationship between the strong commitment of top policymaker and the performance of implementation in developing countries can be seen; Gabriel U. Iglesias, "Marcos" Rice Self-Sufficiency Program: Leadership Role in Implementation," Gabriel U. Iglesias (ed.), *Op. cit.*, pp. 1-34.
- 22) See Larry L. Burmeister, "The South Korean Green Revolution: Induced or Directed Innovation?" *Economic Development and Cultural Change* 35(1987), p. 771.

- 23) Here, "Tongil" variety have been used to represent other highyielding rice varieties such as Yushin and Milyang.
- 24) Young Whan Kihl and Dong Suh Bark, "Food Policies in a Rapidly Developing Country: The Case of South Korea, 1960-1978," *The Journal of Developing Areas* 16(1981), pp. 51-54.
- 25) See Larry L. Burmeister, *Research, Realpolitik, and Development in Korea: The State and the Green Revolution* (Boulder: Westview Press, 1988), Yong-Chie Park, "Hyukshin ui Hwaksankwajeong: Dasuwahk Pumjong ui Hwaksankwajeong Bunsuk" (Diffusion of Innovation: An Analysis of Diffusion Process of High-Yielding Varieties in Korea), (Seoul: Ph.D. Diss. Seoul National University, 1983), Burmeister, *Op. cit.*; Kihl and Bark, *Op. cit.*
- 26) This discussion on the general features of policymaking process in Korea is adopted from Jong-Youl Yoo, *Op. cit.*
- 27) See Burmeister, *Op. cit.*, 1987.
- 28) Dong Suh Bark and Young Whan Kihl, *Sikryang Cheongchek ui Kyeoljeong Kwa Guchewha: Hankook ui Hae* (Decision of Food Policy and Its Specification: A Case of Korea), p. 214.
- 29) In-Hwan Kim, *Op. cit.*, pp. 24-69.
- 30) In case rice price decision, the Economic Planning Board become more dominant institution than the MAF. See Dong Suh Bark and Young Hwan Kihl, *Op. cit.*, pp. 214-234. And, during the implementation of the Green enforcement of policy directives on the Green Revolution.
- 31) See Larry L. Burmeister, *Op. cit.*, 1987, p. 773.
- 32) Young Whan Kihl and Dong Suh Bark, *Op. cit.*, p. 60.
- 33) For example, the MAF announced that the goal of Tongil planting acreage in 1976 is 620,000ha. The *Hankook Kyungje Sinmun*, 16 January, 1976.
- 34) The *Nongeuip Kyungje Shinbo*, 13 January, 1974.
- 35) See Burmeister, *Op. cit.*, 1987, pp. 772-773.
- 36) The *Hankook Kyongje*, 26 March, 1975. For example, The fund which used to encourage to seed Tongil was 930,000,000 Won (1,330,000\$) in
- 37) The *Hankook Ilbo*, 9 May, 1975; The *Hankook Kyongje*, 10 May, 1973.
- 38) Yong-Chie Park, *Op. cit.*, p. 107.
- 39) Larry L. Burmeister, *Op. cit.*, 1987, p. 783 In fact, President Park announced at the annual New Year's press conference in 1977 the South Korea government can offer food aid to North Korea to alleviate reported food shortages there.
- 40) Yong-Chie Park, *Op. cit.*, p. 114.
- 41) The *Hankook Ilbo*, 6 June, 1979.
- 42) Kihl and Bark, *Op. cit.*, p. 60.
- 43) Young Whan Kihl, *Op. cit.*, p. 138.
- 44) See Chung-Si Ahn and Kyong-Dong Kim, "The Structure of Local Government in South Korea: Participation and Performance," *Social Science and Policy Research* (Seoul: The Institute of Social Sciences) 6(1984), 91-115.
- 45) Chung-Si Ahn and Kyong-Dong Kim, *Op. cit.*, p. 99.
- 46) Young Whan Kihl and Dong Suh Bark, *Op. cit.*, p. 62.

- 47) In addition to the role of extension, the ORD is also responsible for agricultural research. But the President Park placed the ORD out of the MAH to the MAH for effective achievement of rural development.
- 48) The RGO are currently involved in implementing the following policy direction from issued by the ORD or central government: (i) development of food resources; (ii) utilization of idle land resources; (iii) technical dissemination to increase farm income; (iv) innovation of farming techniques; (v) improvement of rural life; (vi) training of rural leaders; and (vii) strengthening of cooperation among institutions. See Sung Hwan Ban, Pal Yong Moon and Dwight H. Perkins, *Rural Development* (Cambridge: Harvard University Press, 1980), p.270.
- 49) In Hwan Kim, *Op. cit.*, p. 87.
- 50) In Hwan Kim, *Ibid.*
- 51) Sung Hwan Ban, et. al., *Op. cit.*, p. 262.
- 52) The Dong-A Ilbo, 21 July, 1977 (Kimpo gun); The Kyoungsang Sinmoon, 4 July, 1978 (yeoju gun).
- 53) Sung Hwan Ban, et. al., *Op. cit.*
- 54) The Hankook Ilbo, 20 April, 1976 (Kyoungnam province) and 15 Feb. 1978 (Youngchun gun).
- 55) See Dong-Suh Bark and Young-Hwan Khil, *Op. cit.*,
- 56) Sung Hwan Ban, et. al., *Op. cit.*, p. 263.
- 57) See Burmeister, *Op. cit.*, p. 772.
- 58) See Michael Tharsher, "Exchange Networks and Implementation," *Policy and Politics* 11 (1983), 375-395; Warren F. Ilchiman and Uphoff, *The Political Economy of Change* (Berkeley: University of California Press, 1969).
- 59) Pal Yong Moon, "The Evolution of Rice Policy in Korea," Chuk Kyo Kim (ed.), *Industrial and Social Development Issues* (Seoul: Korea Development Institute, 1977), 3-41; Young Whan Kihl, *Op. cit.*;
- 60) Sung-Geun Chang, "Sikryang Jeungsan kwa Nongchonjedoshaeup ui Yeukhwai," (Food Production and the Role of Rural Guidance Programs: The Case of Rice) (Seoul: Master Thesis, Seoul National University, 1976), p. 47.

	Cultivating Tongils	Increased pride of agricultural product	Side- business income	Others	Total
%	65.5	17.3	16.3	0.9	100

61) It is hard to separate the performance of self-sufficiency policy from the steadfast or weakness of administrative management in rural areas. But little study have been taken for studying about the middle and low rural officials who actually implement the self-sufficiency policy in the rural areas. In this section, I will focus on governmental "measures" rather than "programs" toward local implementors through both administrative carrot and stick. About the importance of incentive systems in policy implementation, see Richard Heaver,

*Bureaucratic Politics and Incentives in the Management of Rural Development* (World Bank Staff Working Paper 1537) (Washington, D.C: The World Bank, 1982); Berry M. Mitnick and Robert W. Backoff, "The Incentive Relation in Implementation," George C. Edwards III (ed.), *Public Policy Implementation* (Greenwich: JAI Press, 1984), 59-124.

62) Sung Hwan Ban, *Op. cit.*, p. 271.

63) See Richard Heaver, *Op. cit.*, p. 31.

64) In Korea, most rural administrators have their jobs in their native villages. Therefore, their relations to clients are very close because most relations depends on day-to-day interactions or kinship.

65) The Hankook Ilbo, 20 Jan. 1974, 30 Dec. 1976; Yong-Chie Park, *Op. cit.*

66) Burmeister, *Op. cit.*, p. 774.

67) The Rural Development Office, *The Analysis of Guidance Agent Activities and Policy Suggestion* (Seoul, The Rural Development, 1981); Jang, *Op. cit.*

68) Ban et. al state this types of administrative measure from both positive and negative perspective as follow:

...there are signs of improved morale, a greater sense of purpose, and a new confidence in the administration's capacity to deal with practical problems. Also, standards of personal performance have improved, both in terms of upgrading administrative and technical skills, and through shutting off many of the opportunities for corruption. Most farmers are gratified by the attention they are getting, but there has also been some puzzlement and cynicism over the frequent visits and other demonstrations of concern by officials for their welfare. (pp. 276-277).

69) See In Hwan Kim, *Op. cit.*, pp. 170-182.

70) Many local administrators dispositioned simply because of low performance or poor compliance to central policy directions. The Hankuk Ilbo, 16 May, 1975; 9 March, 1977.

71) In fact, the amount of fertilizer and pesticides were rapidly increased during the Green Revolution than before.

*Major Off-Farm Agricultural Inputs, 1965-1980*

(amount and percentage increase)

Year	Fertilizer		Pesticides	
	Metric Tons	% Increase	Metric Tons	% Increase
1965	393,098	—	9,433	—
1970	562,902	43	10,926	16
1975	886,208	57	19,126	75
1980	828,039	-7	41,824	119

Source: National Agricultural Cooperative Federation, *Agricultural Cooperative Yearbook*, various years.

72) About Korean rice price system, see Avishay Braverman, Choong Yong Ahn, Jeffrey S. Hammer, *Alternative agricultural Pricing Policies in the Republic of Korea*, World Bank



- Staff Working Papers, no. 621 (Washington, D.C.: The World Bank, 1983); Kym Anderson, "Korea: A Case of Agricultural Protection," Terry Sicular (ed.), *Food Price Policy in Asia: A Comparative Study* (Ithaca: Cornell University Press 1989), 109-153; Pal-Yong Moon and Bong-Soon Kang, *Trade, Exchange Rate, and Agricultural Pricing Policies in the Republic of Korea*, World Bank Comparative Studies (Washington, D.C.: The World Bank, 1989).
- 73) However, Pal Yong Moon argues that "historically, the government's major emphasis in rice policy was directed maintaining low prices for urban consumers and preventing wide seasonal price fluctuations rather than maintaining adequate prices to support farm incomes." Pal Yong Moon, "The Evolution of Rice Policy in Korea," *Food Research Institute Studies* 14(1975), p.392.
- 74) Burmeister, *Op. cit.*, p. 773.
- 75) However, implementation of a dual-price system is expensive since the financial burden of the grain management fund amounted to more than 9 billion won (approximately 22 million U.S. dollars), and 45 billion won in 1975.
- 76) About controlled implementation, see Frank J. Thompson, "Policy Implementation and Overhead Control," George C. Edwards, III (ed.), *Public Policy Implementation* (Greenwich: JAI Press, 1984), pp. 3-26.
- 77) Paul Berman, "Thinking About Programmed and Adaptive Implementation: Matching Strategies to Situation," Helen M. Ingram and Dean E. Mann (eds.), *Why Policies Succeed or Fail* (Beverly Hills; Sage Publications, 1980), pp. 205-230.
- 78) Angela Browne and Aaron Wildavsky, "Implementation as Mutual Adaptation," Pressman and Wildavsky, *Op. cit.*, pp. 206-231.
- 79) Eugene Bardach and Robert A. Kagan, *Going by the Book: The Problem of Regulatory Unreasonableness* (Philadelphia: Temple University Press, 1982).
- 80) Burmeister, *Op. cit.*, p. 783.
- 81) Frank Thompson contends that "in most cases, sound policy (e.g., enforcing civil rights) may require a strong elements of coercion by those with legitimate claims to authority." Thompson, *Op. cit.*, p. 9.
- 82) See Joel S. Migdal, *Strong Societies and Weak States: State-Society Relations and State Capabilities in the Third world* (Princeton: Princeton University Press, 1988) Migdal argues that "the strength of the state organization in an environment of conflict has depended, in large part, on the social control it has exercised. The more currency that is, compliance, participation, and legitimation-available to state leaders, the higher the level of social control to achieve state goals."
- 83) Eugene Bardach, *The Implementation Game: what Happens After a Bill Becomes a Law* (Cambridge: The MIT Press, 1978); Martin A. Levin and Babara Ferman, *The Political Hand: Policy Implementation and Youth Employment Programs* (New York: Pergamon Press, 1985).
- 84) Richard I. Hofferbert, *The Reach and Grasp of Policy Analysis* (Tuscaloosa: The University of Alabama Press, 1990), p. 73.
- 85) *Ibid.*