

(Abstract)

Public Acceptance and Bureaucratic Resistance:  
A Case of the Spent Diaper Recycling in Korea

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Why is it the case that although the general public give strong support on an issue to become a governmental policy, the bureaucrats hesitate to realize the public wish into a public policy? The case in question is a possible recycling of the spent diaper which has been land-filled by law in Korea. This study is an attempt to explain the motives and behaviors of those relevant groups surrounding the recycling issue for the spent diaper. Particular attention is given to the question on the reasons for the bureaucrats to take a role of the blame avoider in dealing with the waste products. This study will seek the way to transform the reluctant bureaucrats into those who advocate the goals of the issue and those who become willing to turn it into the policy to be implemented.

It is not unusual to conjecture that the difficulties in the recycling of the spent diapers can be found in the political and bureaucratic realities in searching appropriate means to carry out its policy objectives. That is, those who have interests in the issue tend to share a high degree of consensus on the policy goals that the issue is searching, but they have difficulties or disagreement or different point of views over how to achieve the goals they tend to agree. They are, in fact, disagreement over the means. The type of the issue that shows this pattern of conflicting nature is classified as a valent issue by which the issue over the spent diaper recycling seems to be well suited in characteristics.

What is important to the valent issue to become the public policy is how to make the bureaucrats become the policy advocate by affecting them to overcome the attitude of the blame avoider that they may have to take due to the uncertainties over the means to achieve the policy goals. With the understanding on the nature of the valent issue, this study searches the reasons for the bureaucrats taking the blame avoider attitude over the spent diaper recycling and discusses viable ways to make them switch into the policy advocate role on the issue.

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## I. Introduction

Why is it the case that although the general public give strong support on an issue to become a governmental policy, the bureaucrats hesitate to realize the public wish into a public policy? The case in question is a possible recycling of the spent diaper which has been land-filled by law in Korea. In order to examine this question, one must investigate, among other things, the guidelines that determine which waste products are to be recycled, incinerated, or land-filled, the attitudes of bureaucrats in handling the issue, and the reasons for the attitudes that the public take.

This study is an attempt to explain the motives and behaviors of those relevant groups surrounding the recycling issue for the spent diaper. Particular attention is given to the question on the reasons for the bureaucrats to take a role of the blame avoider in dealing with the waste products by examining the case of the spent diapers in Korea. This study will seek the way to transform the reluctant bureaucrats into those who advocate the goals of the issue and those who become willing to turn it into the policy to be implemented.

The spent diaper, the case in this study, is a dual property good: a waste after its use but a resource if recycled. If the spent diaper is land-filled or incinerated, it is a waste that may potentially harmful for the environment. If it is recycled, on the other hand, it can be used as a material for other products. In countries like Netherlands, Canada, Australia, and England, it is presently recycled, while other countries including Korea, it is not legally permitted to be recycled. Thus, the spent diaper is, in fact, treated as the waste in some countries, while being used as a productive material in other countries.

The question, then, becomes why some countries do not allow it recycled. The reason that economic merit is not attained by recycling does not seem to make a sense, because as indicated above, private and commercial entities in those countries are currently engaging in the recycling business and apparently making acceptable profits. For example, there are 122 local governments of Netherlands participate in the spent diaper recycling, and Melbourne of Australia began to recycle it since 2004 and will expand recycling into other localities soon<sup>1)</sup>

In other countries like the U. S., a pilot project has been carried out to see the effect of the spent diaper recycling in terms of environmental and economic purposes.

It is not unusual to conjecture that the difficulties in the recycling of the spent diapers can be found in the political and bureaucratic realities in searching appropriate means to carry out its policy objectives (Rochefort & Cobb, 1994). That is, those who have interests in the issue tend to share a high degree of consensus on the policy goals that the issue is searching, but they have difficulties or disagreement or different point of views over how to achieve the goals they tend to agree. They are, in fact, disagreement over the means. The type of the issue that shows this pattern of conflicting nature is classified as a valent issue by which the issue over the spent diaper recycling seems to be well suited in characteristics (Stokes, 1963, 1992).<sup>2)</sup>

What is important to the valent issue to become the public policy is how to make the bureaucrats become the policy advocate by affecting them to overcome the attitude of the blame avoider that they may have to take due to the uncertainties over the means to achieve the policy goals. With the understanding on the nature of the valent issue, this study searches the reasons for the bureaucrats taking the blame avoider attitude over the spent diaper recycling and discusses viable ways to make them switch into the policy advocate role on the issue.

## II. The Korean System for the Spent Diaper Management

In Korea, the diaper after its use has been managed under the Law for the Resource Conservation and the Recycling Promotion since 1993.<sup>3)</sup> Under the law, the producers of the

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1) <http://www.knowaste.com/>

2) The similar behavioral pattern among those related to the issue can be also found in the child abuse protection (Nelson, 199X).

3) The waste products that are allowed to be recycled are under the Extended Producer Responsibility (EPR). Under EPR, the producer bears a degree of responsibility for the products to the end of their useful life by being imposed a mandatory recycling amount on the products and paying recycling dues on the unfulfilled amounts. Specific information about the items under EPR can be found in the following web-site. [http://www.envico.or.kr/language/Eng\\_new/waste/extend01.jsp](http://www.envico.or.kr/language/Eng_new/waste/extend01.jsp)

new diaper including the importers are forced to pay a fixed amount charge per diaper for the government to properly dispose it after its use. This charge system is designed to deal with the wastes which meet the following conditions. First, it can be environmentally hazardous unless special care is given by the authority. Second, the waste can not easily be recycled and recycling may cause another environmental problems. Third, the waste products are allowed to be recycled if it would give difficulties in the waste management system.

The Korean government presently does not include the spent diaper as a waste product to be recycled, because it meets all conditions of exclusion. The article 12 of the Law specifies that the charge per diaper is 1.2 won.<sup>4)</sup> With this money, the government collects the spent diapers and land-fills them.<sup>5)</sup> In 2007, the amount of charges that the producers are notified to pay is 22.85 billion won, which would account for about 19 billion diapers weighing 390,000 tons.<sup>6)</sup> Disposing this amount of diapers is not only wasting a valuable resources of pulp and plastic, but also damaging the environment. It is known to be that the lan-filled diapers would take more than 100 years to be properly disposed (ENVICO, 2006). Furthermore, the land-filled diapers contaminate the soil and the water in a significant manner.

A time-wise depiction of the spent diapers is shown in Table 1. In 2007, the new diapers sold are 19 billions in numbers. The peak in numbers was in 2002. The recent pattern is in declining numbers of the new diapers sold. It may reflect the declining birth rates in Korea. As life expectancy increases, however, the use of the diaper among the elderly would be increasing.

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4) The charge per diaper will be increased to 3.3 won from 2010 til 2011 and 5.5 won from 2012.

5) If used for the medial purpose, diapers are incinerated by the Law.

6) Since a diaper is charged for 1.2 won, the total amount levied is a collection of charges from 19 billion diapers (22.85 billion won divided by 1.2 won per diaper). Since a spent diaper is weighed, on average, about 300g, 19 billion diapers weigh about 390,000 tons (19 billion diapers \* 300g each).

<Table 1> The Statistics of the Spent Diapers: 1997-2007<sup>7)</sup>

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
product charges (million won)	1,683	2,148	1,545	2,120	2,398	2,594	2,537	2,379	2,337	2,300	2,285
new diapers sold (million numbers)	1,403	1,799	1,287	1,767	1,998	2,162	2,114	1,983	1,948	1,916	1,904

A diaper in Korea, as is the case in most countries, takes a quite simple process from the initial purchase to the final disposal. First, a new diaper is purchased by the consumers. It is mostly used for babies and olds. After its use, the spend diaper is disposed by the users as a part of the household waste. Second, the disposed diaper from the household is collected and transported by the local government waste collection system and buried in the land-fill area.

### III. Social Attitude on Resource Conservation and the Spent Diaper

Social attitude, which is reflected in public opinion, on the resource conservation is very positive and supportive. Even the manufacturers of the products share similar attitudes as the public on the recycling of the their used products. For this, the manufacturers of the new diaper is no different. They believe that anything can be recycled if decided to do so, but it must be determined with prudent analysis. The question is, then, whether the spent diaper is qualified as an item to be recycled in terms of the purpose, the method (techniques and management), the cost, and the social significance.

First, the social approach over the recycling differ from a country to another depending on the circumstances that the country is dealing with. For instance, country with large geographical space would be more lenient to land-fill than others without. Those countries with the limit in geography tend to favor incineration of the waste. Germany is a good case with a relatively small space and practices the incineration method for finalizing the waste, while the

7) The number of new diapers sold is an estimation that is calculated based on the total amount of the product charges that the manufactures paid to the government. The manufactures pays 1.2 won per diaper. The data is provided by the ENVICO which is responsible to levy and collect the product charges.

U. S. is more inclined to the land-fill for the waste disposal.

Second, the public perception toward the issue may influence significantly the way the waste to be disposed. This is a reflection such that if the public favorably evaluates the issue, it will more likely get the attention by the government (Cobb & Elder, 1981). A good case for the example is that when the Korean government decided to allow to import the US beef with the potential health dangers, the public overall demonstrated their strong disfavor and eventually the government had to change its original attitude by re-negotiating it with the U.S.

Third, the emphasis on the cost on the recycling becomes an important element in deciding whether the recycling will be carried out. It is particularly a significant issue in time of economic difficulty and when the market orientation becomes stronger than before. There are also perceptions in society that the recycling should be reconsidered if it does not satisfy the economic condition of the efficiency. This attitude gets more support as the economic difficulty sets different priority in the resource allocation. Another dimension has to do with the social inclination toward the smaller government in handling the social issues like the recycling.

Even with these understandings, some do cast doubts on the possible recycling of the spent diaper. As seen in Table 2, the list includes the reasons that make the recycling of the spent diaper difficult. listed are costs and benefit mismatch, technical infeasibility, the lack of marketability of the recycled, the externality of the recycling, and the technical changes.

The cost involved in the diaper recycling is the primary concern. This argument seems to have a merit for consideration because, generally speaking, the recycling is the most expensive in comparison to land-fill or incineration. But, the question on recycling is usually a social decision in consideration of the environment and the quality of life instead of how expensive to do it. That is, the decision as to the possible recycle of the waste must be based on the social consensus about what should be done. In calculating the costs of the recycle, its benefits, monetary or else, must also be considered. The recycled product can have market values and the recycling itself gives such non-monetary returns to the society as satisfaction from protecting environment by less use of the raw material. The case of the

spent diaper is less of concern in the cost issue, because the recycling can produce a marketable product of pulp and plastic. Recycled pulp and plastic have been sold and producing enough market values. In Netherlands, a private firm is in business without any governmental subsidy at all.

<Table 2> Concerns over the Spent Diaper Recycling

elements	Why worry with the diaper recycling
cost overrun	costs over-run benefits in LCA(Life Cycle Assessment) perspective.
technical difficulty	technical difficulty on separation of complex materials of diaper.
marketability	low quality of the recycled and non-existence of recycling market
externality	water pollution due to the recycle and unsold recycled becomes waste.
technical changes	less requirement of pulp due to technological improvement

Another concern is related to the technical dimension. Some argue that the recycling may not be technologically feasible. It is because of the fact that a new diaper includes chemical materials that can not easily be separated in the recycling process. Unless the chemical elements (Super Absorbent Polymer) is fully separated, the value of the recycled pulp can be very limited. With plastic, the recycled plastic as a pallet form may not be a single component, which would limit its market values. It is certainly true that the recycled may not be as valuable as virgin materials. But it is also true that the recycled can have sufficient enough market values as long as the virgin material becomes scarce in availability, that will set its price higher as time passes. With technological improvements, any new diaper can have less pulp which would reduce the amount of the recycled. But, as long as pulp is a major part for the diaper, it can also be argued that the recycling is viable means to recover the material that will help sustain the environmental quality.

Additional concern deals with the marketability of the recycled and externality of the recycling. The present market conditions for the recycled are not necessarily favorable but it is

generally dependent upon overall economic conditions. The possibility of generating additional wastes from the recycling effort should also be under consideration. That if the recycled is not marketable, then it becomes waste by definition, is one unwelcomed.

## VI. Issue Characteristics and Bureaucratic Behavior

### 1) The Recycling as a Valence Issue

It is widely accepted that the definition of an issue affects which problems and solutions will gain attention of the public and policy makers (Schattschneider, 1960; Rochefort & Cobb, 1994). Wildavsky goes further to say that the quality of solutions depends upon the definition of the problems (Wildavsky, 1979; Ingram & Schneider, 2006). In this vein, the definition of issues involves politics or a game of power. Schattschneider argued that the definition of the alternatives is the supreme instrument of power" (1960: 66).

<Table 3> Types of Attention to the Valent Issue

Relevant Group	Attention to issue	
	Goal	Mean
Citizen	high	low
Government	high	very high

Framing or reframing issues centers around conflicts about ends or means as seen in Table 3. Rationalist model of decision making posits that the end is given, but the reality frequently belies such a claim. Rather conflicts over the policy goals or ends are ubiquitous (Winshop, 2006; Dearing & Rogers, 1999; Schon & Rein, 1994). Agreement on the goal(s) does not carry an issue or policy itself all the way down to the policy process. It is also widely accepted that a public policy may be not infrequently made without a clearly stated goal or any goal. Goals of a policy may be attached to the policy later on the policy process, and a

policy with a goal may be in drift in the stage of implementing. This implies that policy conflicts more likely occur over the means to the goal, not the goal itself. It may follow that the means is more important in defining the policy problem than a goal (Rocheffort & Cobb, 1994: 24). The means are regarded as involving "desired" values to the participants in the policy process.

Environmental issues come in two types. One is called "position issues" and the other "valence issues" (Stokes, 1963). Position issues are those that involve 'pro' or 'con' positions on the same question (Budge et al., 2001: 83), like a conflict between conservationists and developmentalists. Position issues involve taking sides in conflicts over policy goals or ends. Valence issues are those that do not involve conflict on positions or policy goals, but a disagreement on the means to the goals. For example, a cleaner environment is possibly a policy goal that everybody likes to agree. The ways in which the desirable goal is pursued are easily subject to disagreement. Valence issues are structured around the competence to effectively and efficiently handle the problem that citizens attribute to government agencies (Ganghof, 2009). Disagreement on the means to achieve a commonly shared ends hampers the agenda setting and subsequent policy implementation process.

The valence image of the issue of recycling used disposable diapers is well reflected in the title of Rose Gutfeld's article on December 26, 1989, on Wall Street Journal, "Even Environmentalists Still Use Disposable Diapers." Citizens' preferences are related to various factors, including policy, self-interest or ideology. Mouritzen (1987) reports that ideologies are more important than self-interest in citizens' attitude towards public spending. Sharp (2002) reveals that urban officials' responses to morality issues vary considerably depending upon the ideological stance and degree of controversiality of issue activists. As Bachrach and Baratz (1963) mentioned, certain issues are kept off the policy agenda by economic elites. There are also possibilities of citizens to keep an issue off the public agenda, partly because the issue is perceived to be against their self-interest. Public officials or legislators often keep an issue

off the policy agenda because they fear retribution by the citizens (Majone, 2006: 232). Whether or not a valence issue is taken is dependent upon the level of perceived confidence (Krueger & Dickson, 1994) and the degree of control that a competent public official exerts over the situation (Wehrung, 1989).

## 2) Bureaucratic Behavior of Blame Avoider

Every model or framework in explaining a policy change explicitly or implicitly has its own assumptions on the motivations and behaviors of policy-makers. For example, the framework of institutional analysis and development assumes that a policy is formulated or changed by various socio-economic contexts and institutions. Sabatier's Advocacy Coalition Framework presumes that policy-makers take a role of policy mediator to achieve public interests. In public choice theory, policy-makers are self-interested and motivated to obtain promotion, power, or disposable resources. Though one can observe various motivations and behaviors of policy-makers, however, there is little systematic effort to classify the motivations and their impacts on policy design and change. In fact, one of the missing parts of the current literature on policy-making is the study of the motivations of policy-makers. In this part, the types of policy-makers' motivations, focusing on government officials, are classified based on the current literature.

The most distinctive classification of bureaucrats' motivations are that of public vs. private interest. Several scholars have identified public interests as an important stimulus of bureaucrats' behaviors. Kelman(1987) argues that public officials are motivated by public spiritedness, producing good public policy that can serve the interests of the general public. Also, the self-interest can serve as an important motivation for bureaucrats' behaviors.

Another explanation for bureaucrats' motivation can be found in Weaver (1986). According to him, the motivations of policy-makers include credit claiming, good policy, and blame-avoidance as reported in Table 4. He argues that public officials are mainly motivated by the electoral motivations such as reelection, reappointment, and promotion. Further, he

argues that this electoral motivations is valid only when the constituents systematically respond to the gains and losses by a policy. Also, in most cases, the constituents are more sensitive to losses than gains, and this tendency forces policy-makers to avoid blame, which may result from big losses, rather than to maximize credits by actively participating in a policy process. In particular, the motivation for blame-avoidance is increased when there is a pressure from various social groups regarding a policy.

<Table 4> Attitudes of Policy-makers by Motivations

Motivations	Good Policy	Credit-Claiming	Blame-Avoiding
Attitudes toward costs and benefits	maximize social net benefits	maximize the benefits of the concentrated groups	minimize the losses of the concentrated groups, even it sacrifices bigger benefits
Attitude toward discretion	indifferent or opposed	favorable	suspicious
Attitude toward policy leadership	indifferent	favorable	suspicious

Weaver(1986), p.375.

Weaver also argues that politicians and bureaucrats are not always blame-avoiders. Thus, it is important to explain the linkage between the specific policy situations or contexts with a specific motivation. According to him, this linkage depends on the distribution of net benefits and net costs by a decision. He suggests the following typology of policy-makers' motivation based on the distribution of benefits and costs as reported in Table 5.

<Table 5> The Distribution of the Benefits and Costs and Policy-makers' Motivation

		Net Benefits by Decision	
		High	Low
Net Costs by Decision	High	Blame Avoiding	Credit-Claiming
	Low	Credit-Claiming	Non-electoral motivations

Source: Weaver, p.378.

As can be seen in Table 5, the situation that policy makers have blame-avoiding motivation is one that includes high net benefits to some groups and high net costs to other groups. This situation is similar to that of Wilson's interest group politics. An interesting difference is that Wilson asserts that policy maker will play a mediator's role between conflicting groups in this situation, while Weaver argues that policy makers will actively adopt various strategies to avoid a possible responsibility following by a certain decision.

## V. Feasibility of the Spent Diaper Recycling

Presently, the spent diapers are land-filled as a household waste in most countries. As discussed, Korea is not an exception. They are disposed in a household waste bag.<sup>8)</sup> In the city of Arnhem, Netherlands, on the other hand, the spent diapers are used as a source for producing the fertilizer.<sup>9)</sup> In some other countries, they are commercially recycled. To verify the feasibility of the spent diaper recycling, this study examines the following aspects that are related to the recycling issue overall: technical feasibility, economic feasibility, and social feasibility.

### 1) Technical Feasibility of the Recycling<sup>10)</sup>

The key to the recycling of the spent diaper is a separation of chemicals from pulp. The chemical used for holding watery materials into the diaper is called as Super Absorbent Polymer (SAP). The technology for the separation is under the international patent by Knowaste.<sup>11)</sup> Since the technology is under the international patent and presently applied in the private business, it is safe to say that the spent diaper recycling is technically feasible as long as appropriate arrangement is set-up.

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8) The Korean central government has implemented the household waste bag policy since 1995, under which all household waste including the spent diapers must be put into a designated bag for proper disposal. Each household should purchase the bags from the local government. The price would differ depending on its size and the locality where the bag is to be used. If this rule is violated, the individual with violation is subject to fairly stiff penalties.

9) This is not a recycling in a strict form because it does not make waste material into a reuseable one.

10) More detailed analysis on the technical feasibility is found in ENVICO (2006).

11) This is a Canadian firm which has operating facilities in Netherlands, Australia, and England. The patent number in the U. S. is 5558745 (9-24-1996).

## 2) Economic Feasibility of the Recycling

It is a rather complicated process to find out if the recycling of the spent diapers is economically feasible. It is because of the fact that the economic feasibility can differ depending upon the criteria that consist of the cost and the benefit. So called Cost/Benefit analysis of the spent diapers is also dependent upon the social perception on the recycling and the potential amount of the spent diapers.

This study utilizes the standard form of C/B technique to evaluate economic feasibility of the spent diaper recycling. The major premises used for the analysis are 1) the facility construction costs estimated by Knowaste, 2) the operating cost for the waste vinyl factory presently operating in Korea, 3) all of the spent diaper to be land-filled, 4) 1.2 won of product charge per diaper, 4) the capacity of the facility is for 4,000 ton per year.

As seen in Table 6, the criteria used to calculate the total costs of the recycling include the facility construction, the operation, the collection and transportation. The benefit criteria include the revenue from sales of recycled pulp and plastic, savings from land-fill exemption, savings from costs of the garbage bags, and the amount of the product charge to be levied.

<Table 6> The B/C Analysis of the Spent Diaper Recycling (unit=100 million won)<sup>12)</sup>

Class	Items	cost/benefit
cost	facility	4.3
	operation	3.9
	total	8.2
benefit	pulp sale	0.7
	plastic sale	1.0
	land-fill saving	1.1
	product charge	0.5
	garbage bag saving	2.9
	total	6.2
total	benefit-cost	- 2.0

As seen in the table, the annual recycling of the spent diaper of 4,000 ton would cost additional 200 million won for a yearly operation. Thus, the recycling may be unprofitable business. What this analysis does not include are the public satisfaction on the saving environment by the recycling of the limited resources of pulp and plastic. The government seems, surely, to have good justification to assist the recycling facility for additional 200 million won. That is, the price of 200 million won a year is far small to generate the public support and participation to maintain and improve the environment. If all the spent diapers would be recycled, the amount of the governmental financial assistance or subsidy would become around 20 billion won.<sup>13)</sup>

12) The facility is assumed to handle 4,000 ton per year. Knowaste estimates 430 million won to set it up. With an expectation of 10 year operation, annual capital costs for the facility become 430 million won per year. For benefits, this study does not include the land saving in the land-fill area because of the difficulty in figuring out how much land is needed for 4000 ton of the spent diaper.

13) In Korea, annual spent diapers would account for about 400,000 ton. If all of them are to be recycled, there may need to set up about 100 facilities. If a larger facility can be considered depending on the locations and the amount it can handle, the recycling costs would become less and less because of the economies of scale.

### 3) Social Feasibility of the Recycling

Table 7 reports the results of a survey in which 101 mothers of infants living in the metropolitan area of Seoul and 75 managers of the nursery home located in Seoul. Its purpose is to find out whether they would favor the recycling of the spent diaper and how willingly they would participate the recycling program if it be implemented.<sup>14)</sup> As seen in the table, 8 mothers out of 10 support the recycling and almost all of those who work for the nursery homes share the same perception with the mothers. With this result, it is certain that those who use the diapers are very much in favor of the recycling. The support is stronger among those who work for the nursery than the mothers.

<Table 7> Perception on the Recycling

classification		mothers of infants		managers of nursery	
		frequency	%	frequency	%
Recycling	needed	74	73.3	68	90.7
	not needed	27	26.7	7	9.3
total		101	100.0	75	100.0

Table 8 reports the opinion of the mothers toward their willingness to participate the recycling program if it is to be implemented and their preference on the disposal methods for the spent diaper. 56.4% of the mothers in the survey would willingly participate the recycling regardless of the disposal methods. If the disposal methods are preferable to mothers, an additional 40.6% said they will be in the recycling program. Only 3% of them said they will not take a part to the program. This finding suggests that if a proper disposal methods are provided, virtually all mothers with the infants would be willing to participate the spent diaper recycling.

14) The survey was carried out during October 16th through 18th 2006, as a part of the study conducted by the primary writer of this study and sponsored by the Korean ENVICO. The mothers were interviewed in places like super-markets, nursery homes, and children's hospital. Although samples were not drawn randomly, the perception about the issue would not differ much in any other samples. It is because the issue in question does not have location or target specific nature, which may produce different results depending on the sample type.

<Table 8> Willingness of Participation

Question	Responses	Frequency (%)
Whether or not to participate in the recycling	Participate without condition	57 (56.4)
	Participate if proper methods given	41 (40.6)
	Will not participate	3 (3.0)
	Total	101 (100.0)

For the preference on the disposal methods of the spent diaper, as seen in Table 9, mothers are splitted in half either for using a household disposal bag or using a centralized collection container place in a designate location. Under the household collection bag method, mothers put the spent diapers in a collection bag at home and then at the designated time and day, they put the bags to the container. Under the centralized collection container method, mothers, at any time, dispose the spent diaper into the container. The latter method may provide more convenience to mothers than the former.

<Table 9> Preference to Disposal Methods

Question	Response	Frequency (%)
Preference on the disposal methods	Household collection bag	46 (45.5)
	Centralized collection container	55 (54.5)
	Total	101 (100.0)

Nine out of ten mothers agree on the implementation of a pilot program as seen in Table 10. Same number of them are willing to participate the program. The nursery homes are not exception. This findings demonstrate that the recycling initiative does have a strong public support. Thus, it is safe to say that social feasibility is with the spent diaper recycling.

<Table 10> Perception on the Pilot Program

question	response	Frequency (%)
whether they agree on a pilot program	yes	97 (97.0)
	no	3 (3.0)
	total	100 (100.0)

## VI. Conclusion

As discussed the above, the public and bureaucrats demonstrate quite supportive attitudes of about the recycling in general. That is, they are, like any citizens in a society, in favor of saving the environment by either supporting or participating the recycling efforts. And there exists technical feasibility and, to some extent, the economic feasibility can be sustained. Even with these findings, the spent diaper recycling in Korea is not allowed. It is because, in some cases, the bureaucrats show a very reluctant attitude in designing and implementing the recycling program. This is a contradicting attitude.

<Table 11> The Recycling Attitude between Citizens and Bureaucrats

Relevant Groups	Attitude on the Recycling	
	Yes	No
Citizen	◇	-
Bureaucrats	-	◇

As seen in Table 11, citizens are in favor of it, while the bureaucrats are not. This contradiction can be explained by the notion of the valent issue and the blame avoidance posture that the bureaucrats would take. The major reason for this stand is that the recycling of the spent diaper may have potential difficulty in implementation. In particular, bureaucrats tend to be concerned about the failure of its collection for whatever reason. If it happens, then the blame would be placed on the government. It is typical when the issue is valent like the spent diaper recycling. One way to deal with this problem is that the government would

not penalize the bureaucrats for the implementation problem that might occur and delegate its responsibility to the local government such that the collection of the spent diaper can be done through the existing garbage collection system.

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