

Development of Checklist for Self-Assessment of Regulatory Capture in Nuclear Safety Regulation

K.S.Choi*, Y.E.Lee, H.S.Chang, S.J.Jung

Korea Institute of Nuclear Safety, 34 Gwahak-ro, Yuseong, Daejeon 305-338, Korea

*Corresponding author: choi@kins.re.kr

1. Introduction

Regulatory body performs its mission on behalf of the general public. As for nuclear industries, the public delegates the authority to the regulatory body for monitoring the safety in nuclear facilities and for ensuring that it is maintained in the socially and globally acceptable level. However, when the situation that a regulatory body behaves in the interests of industries happens, not working primarily for protecting public health and safety on behalf of the public, it is charged that regulatory body acts as an encouragement for industries which produce negative externalities such as radiation risk or radiation hazards. In this case, the regulatory body is called as "Captured" or it is called that "Regulatory Capture" happened. Regulatory capture is important as it may cause regulatory failure, one form of government failure, which is very serious phenomenon; severe nuclear accident at Fukushima nuclear power plants recently occurred in March, 2011.

This paper aims to introduce the concept of regulatory capture into nuclear industry field through the literature survey, and suggest the sample checklist developed for self-assessment on the degree of regulatory capture within regulatory body.

2. Review of Regulatory Capture

The terminology of regulatory capture has been generally used in economics or public choice theory. The former explains that regulatory capture occurs when a state regulatory agency created to act in the public interest instead advances the commercial interests it is charged with regulating [1]. Regulatory capture is a form of government failure, as it can act as an encouragement for large firms to produce negative externalities in the nation. In this case, the agencies are called Captured Agencies [1]. In the latter, it is described that regulatory capture occurs because groups or individuals with a high-stakes interest in the outcome of policy or regulatory decisions can be expected to focus their resources and energies in attempting to gain the policy outcomes they prefer [1] in the regulatory process.

The term of regulatory capture is used to explain how political decision-making results in outcomes that conflict with the preferences of the general public and can be understood in relation with the principal agent problem as well. The stakeholders are the principal and the management is agent. When one stakeholder or public, the principal, hires an agent, the regulator, to

perform tasks on his behalf, but cannot ensure that the regulator performs them in exactly the way the public would like [2].

The problem of regulatory capture is that industries gain control of a regulatory agency which regulates them. Some stakeholders may focus their resources to gain what they want or to exercise the capturing influence for a particular policy outcome from the regulator. Therefore, regulatory body should be protected from outside influences as much as possible because a captured regulatory body is worse than it does not exist at all.

3. Regulatory Capture in Nuclear Safety Regulation

The primary mission of the regulatory body in nuclear field is to ensure adequate protection of the public health and the environment against radiation hazards that may accompany the peaceful use of nuclear energy. In the nuclear field, the principal is the public and the agent is the regulatory body. The problem is that the regulator can be confused in conducting the mission of regulating properly the utility which would like to capture the regulatory body.

If the regulator becomes captured, it can make a decision for the industry, behave on behalf of the utility as whole, or even place a priority on promoting nuclear industry over ensuring nuclear safety. For examples, in case that the government sets the goal of exporting nuclear power plants, many organizations such as power generation company, engineering company, R&D institutes and universities share the goal of promoting the nuclear export industries, and even the regulatory body may, under the government, participate in the export drive. The similar example can be seen in the environmental regulation relating to the abatement of carbon dioxide emission to prevent the global warming. The government may hesitate to set the target the nation should reduce the emission amounts, because the strict and aggressive target of carbon dioxide abatement may let the industries shrunk. It leads the government to a dilemma between developing the nation-wide industries and protecting the environment.

To prevent the wrong decision in nuclear regulation, the IAEA Safety Fundamentals provides a coherent set of principles that constitutes the basis of establishing safety requirements. One of the principles is the independence of regulatory body. The principle stipulates that the government in cooperation with legislative bodies should establish an effectively independent regulatory body [3]. It is important that the

regulatory body should make a decision independently to carry out its primary mission; however, the capture of the regulatory body may even occur without the awareness of regulator's being captured by the interests of the utilities. This paper suggests that the staff members of regulatory body check the degree of the regulatory capture by themselves. The checklist shown in this paper is under development and still needs improvements, however, it is useful to understand the concept of regulatory capture and become cautious not to be captured unconsciously, before capture is widely spread.

4. Checklist for Self-Assessment

According to the literature on regulatory capture, it is caused by four characteristics as follows [4];

- Regulatory body is highly dependent on the information from the regulated companies.
- Regulatory body has a symbiotic relationship with the regulated companies to resolve the problem of deficiency of manpower.
- Regulatory body, if possible, would avoid conflicts with the regulated companies.
- Regulatory body chooses policy alternatives by the external intervention or influence, not merely by the rationale.

Table 1: Checklist for Self-Assessment of Regulatory Capture

Categories / Attributes		Elements	
No.	Causes of RC	No.	Questions (Expression of Item)
A	The regulatory body is highly dependent on the information from the regulated firm.	A1	Is the licensee's expertise superior to the regulator's?
		A2	Does the regulator rely more on the licensee's information than regulator's own?
		A3	Does the regulator reflect the licensee's view favorably in its technical judgment or regulatory decision?
B	Regulatory body has a symbiotic relationship with the regulated companies to resolve the problem of deficiency of manpower.	B1	Does the regulator have difficulties in securing resources for regulating the licensee?
		B2	Does the regulator have job opportunities provided by licensees after retirement?
		B3	Does the regulator consider the licensee as fund provider for regulation?
C	The regulatory body, if possible, avoids conflicts with the regulated firm.	C1	Does the regulator want to minimize the conflicts with utility in regulation?
		C2	Does the regulator want to avoid establishing the policy that may cause adverse responses from the licensee?
		C3	Does the regulator consider the licensee as a member of nuclear community where it should continuously work together?
D	Regulatory body chooses policy alternatives by the external intervention or influence, not merely by the rationale.	D1	Does the regulator establish the policy based on external response rather than on its own judgment on nuclear safety as public interest?
		D2	Does the regulator decide the achievement of regulatory goal mainly based on the signal from external communities?

In the checklist as shown in Table 1, three or four attributes by each characteristic are questioned according to 5 points scale and at the same time the respondent can know where he/she is between the desirable policy decision and minimum requirement to prevent himself/herself from being captured. More studies and discussions is needed on 'how much desirable is desirable' when the regulators make a policy decision, however, this chart may show the framework to understand what the regulatory capture is, and the signs being captured by interests of the

regulated companies are as well. In Fig.1, red dots are the responses of regulatory personnel, the upper point is the arbitrary policy goal considered as a desirable decision and the lower point is the limit or minimum requirement that the regulator is above. When the response goes to high points, it can be interpreted that the regulator is likely to be captured. However, it is not easy to say with confidence that how seriously the respondent is captured or the respondent marked on the high points is always far from being captured.



Fig. 1: Charts of Responses

5. Conclusions

Regulatory capture happens when a regulatory body acts in the interests of industries or it makes a decision for them. To prevent regulatory capture, this paper introduced the concept of the regulatory capture and shows the sample self-checklist for assessment developed.

Using this checklist for self-assessment of regulatory capture, regulatory personnel may identify the weakness of regulatory body in terms of regulatory capture which may cause regulatory failure resulting in disastrous accident in nuclear facilities and find some ways for anti-capture policy measures.

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