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Establishment of an Incentive System for Prohibition of Lending Firefighting Qualifications and Rental Agencies

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Abstract

This study suggests a solution of an incentive system from the viewpoint of the external effect on the renting of firefighting qualifications and on rental agencies. Currently, the Human Resources Development Service of Korea does not have a penalty for neglecting to perform a search into qualification lending and rental agencies. In the short term, the penal clause should be strengthened so that companies and qualification holders cannot borrow or lend their qualifications. In addition, the Human Resources Development Service of Korea will increase the number of personnel dedicated to investigating the loaning of qualifications. It is necessary for the government to establish a penalty for neglecting to investigate the lending of qualifications for the Human Resources Development Service of Korea. In the long term, the state needs to make only minimal regulations. Also, the state needs to make companies and qualification holders feel like they benefit more when they are not borrowing or lending qualifications. The anticipated effect of this study is that the government will intervene appropriately by applying firefighting qualifications according to market principles. It can also be used as a basis for the revision of related laws on the renting of national technical qualification certificates and the investigation of rental agencies.

Keywords: Renting of firefighting qualifications, Rental agencies, Externality, Korean qualification, Human Resources Development Service of Korea, Incentive system

1. Introduction

It is known that the Human Resources Development Service of Korea neglects the investigation work due to a lack of incentives and penalties for investigations into firefighting license leasing and rental brokerage. This can be attributed to the fact that the incentive system in line with the view of externalities is not properly constructed. For this reason, the purpose of this study is to find out the problem of interested parties regarding the investigation of renting firefighting qualifications and rental agencies from the viewpoint of external effect,

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which is one of the causes of market failure, and to find ways to improve it.

Externalities refer to effects such as unintended benefits or damages that are incurred by economic activities of some economic parties to affect other economic parties but are not settled by the market mechanism. In other words, these activities have unintended effects on others but there is no incentive or penalty for them. Depending on the market principles only, externalities cause problems of preventing resources from being efficiently distributed because externalities lead to overproduction or underproduction in comparison to the optimal level, thereby preventing social benefits and costs from being adequately reflected in the market. A classic example of positive externalities is the effect of a beekeeper and a fruit grower on each other and examples of negative externalities include the effect of a haunted house in a village and the effect of an increase in road congestion[1].

On the other hand, the viewpoints such as constructing incentive systems through the market mechanism[1-6] and maintaining the optimal level[1,2][6,7] are suggested for solutions to the externalities. There are other solutions to externalities such as settlement of property rights proposed by S. Y. Hwang (2006)[8] but these solutions are excluded in this study because they are minority opinions.

The incentive system includes appropriate pollution emission compliance, a subsidy system, an emission tax system, a pollution tax system and a pollution selling system. Adhering to appropriate pollution emissions will prohibit the emission of certain pollutants or force the company or household to install specific facilities. For example the standards of biochemical oxygen demand of the river would be established and companies would be obliged to comply with the standards; a specific disposal or treatment process would be mandated in order to protect the quality of the tap water; and the height of chimneys would be regulated to a certain height in order to prevent smoke. The emission tax system involves collecting a levy from owners who fail to implement the required measures or make the necessary improvements to the worksite within a fixed grace period. Pollution tax refers to taxes levied when certain standards in life or production activities are violated. The pollution selling system is similar to the emission tax system, but it introduces selling tradable permits to companies in advance, which gives them pollution emission rights.

Existing studies on the qualification system based on externalities are as follows. Ha-Sung Kong (2018; 2016)[9][10] analyzed the "market failure theory" represented by monopoly, externalities and asymmetry of information to suggest that the government intervene appropriately by applying qualifications according to market principles. In addition, he examined the roles of the Korean government and the Human Resources Development Service of Korea through the "capture theory" which refers to a problem that could arise from excessive intervention of interest groups. He also derived the implications of qualification acquirers, companies and the Human Resources Development Service of Korea through the "job search theory" and the "human capital theory" in order to understand the meaning of the qualification system in the labor market. Based on these implications, he interpreted the firefighting qualification system[11]. There is a study[12] on the national technical qualifications carried out by Todo, Y. (2000). The analysis of the study shows that there are positive externalities in transferring technical qualifications from developed countries to developing countries because people of developing countries are educated to acquire various qualifications, thereby being given opportunities to acquiring skills. The significance of this study consists in establishing an incentive system for stakeholders in firefighting qualifications in order to further develop the research of Ha-Sung Kong (2018; 2016) based on the study of the overall qualification system conducted by Todo, Y. (2000).

2. Externalities of stakeholders in firefighting qualifications

Table 1 shows the interested parties related to firefighting qualifications. As shown in Table 1, these interested parties can be classified as follows; the government which establishes the firefighting qualification system; the Human Resources Development Service of Korea which implements policies and manages the qualifications according to the established firefighting qualification system; the companies which recruit firefighting qualification holders, to improve productivity; and the firefighting qualification holders employed by the companies who use their skills to improve productivity.

Table 1. Interested Parties

Interested Parties	Responsibilities
Government	Establishment of firefighting qualification system
Human Resources Development Service of Korea	Policy implementation and qualification management
Companies	Recruitment of firefighting qualification holders
Firefighting qualification holders	Employment at companies

2.1 Ensuring the adequacy of incentives or penalties

The Human Resources Development Service of Korea may have access to places of business of the employers who employ or have employed qualification acquirers to investigate violations of prohibitions against license leasing and rental brokerage. According to this regulation, regulation of license leasing is entrusted to the Human Resources Development Service of Korea. As a result of social problems caused by illegal license leasing, the Human Resources Development Service of Korea cooperates with the government to regulate license leasing every year and is planning to continue to expand the regulation. However, the regulation remains nothing more than perfunctory investigations because there is no penalty rule for neglecting the investigation work for license leasing and rental brokerage[13,14]. It is assumed that this is because there is not a well-established incentive system.

In the United States, the dedicated personnel are mobilized to investigate violations in regard to licenses. These personnel file lawsuits and take disciplinary measures against qualification acquirers or companies who violate against prohibitions in regard to licenses and the penalties are strong. In addition to imposing financial penalties, they open the details of the disciplinary measures to the public on their website for 5 years and allow anyone to view the records. As a result, these records remain in personal information of qualification acquirers who violate against prohibitions in regard to licenses as lifelong records, making it difficult for them to engage in work related to firefighting[15].

2.2 Maintaining the optimal level by supplying social products optimally through regulation

A lack of regulation leads to overproduction of companies and qualification acquirers, thereby causing negative externalities but having no relation to positive externalities of the firefighting qualification system. The firefighting qualification system enhances safety for neighbors and the society, thereby having positive externalities, which usually result in underproduction. However, it has no relation to externalities when companies can register and operate with simple conditions met and qualifications can be acquired with minimum 60 points of an absolute evaluation received because there is a lack of regulation. In addition, it has no relation to externalities from the viewpoint of qualification acquirers when qualification acquirers are overproduced as shown in Table 2 in which the number of qualified firefighting engineers is about 15.7 times higher than the number of firefighting facilities, considering that 1 main technician is employed per 1 firefighting facility in most cases. In terms of companies, the number of firefighting facilities increases in such a disorderly manner that they open up and close down repeatedly[16]. This can be attributed to overproduction of companies.

Table 2. Number of Firefighting Engineers Qualified and Number of Fire Fighting Facilities

The number of firefighting engineers qualified	The number of firefighting facilities
114,835 engineers	8,227 facilities

3. Solutions to externals: establishment of a penalty rule for passive investigations into license leasing

The Human Resources Development Service of Korea regulate license leasing passively due to a lack of incentives and penalties for investigations into license leasing and rental brokerage. As a result, the number of crackdowns on illegal rentals has not increased significantly over the past five years, and there has not been much change in the way of cracking down on illegal renting activities[14]. Therefore, it is necessary to provide concrete measures for investigations into license leasing such as establishment of a penalty rule for investigations into license leasing and expansion of the dedicated personnel for the investigations. Also, the penalty clause for negligence of investigators with the Human Resources Development Service of Korea should be applied strictly in order to ensure that the administration is not neglected when enforcing the penalty clause. In the case of the United States, the dedicated personnel are mobilized to investigate violations in regard to licenses and file lawsuits or take strong disciplinary measures against qualification acquirers or companies who violate against prohibitions in regard to licenses. In addition to imposing penalties, these personal open the details of the disciplinary measures to the public on their website for 5 years and allow anyone to view the records, which remain in personal information of qualification acquirers who violate against prohibitions in regard to licenses as lifelong records, leading to considerable disadvantages for them to engage in work related to firefighting[15].

J. H. Park, K. U. Lee, S. K. Jang and B. W. Son (2012)[19] also argue that license leasing should be avoided because license leasing and such will allow unqualified people to enter companies otherwise. In order to

prevent licenses from being leased, it is proposed to establish penalties for passive investigations into license leasing carried out by the Human Resources Development Service of Korea. The government approaches solutions to license leasing from different viewpoints. In other words, the government does not focus on the problems of the government and the Human Resources Development Service of Korea but on companies and qualification acquirers. A leased license is suspended for 3 years or canceled depending on whether it is leased once or more than twice based on the Article 16 of the National Technical Qualifications Act so far but it is necessary to reinforce the penalty clause to cancel the license if its leasing is caught even for once from now on.

On the other hand, J. S. Park and H. S. Kim (2004)[20] argue that the country should carry out only the minimum regulation in regard to management and operation of the qualification system. They note that it is because the overly intensified regulatory role of the country is rather viewed as abuse of power, which will make qualification applicants react against it, let alone improvements to the qualification system.

In this regard, it is necessary in the short term to strengthen the penalty clause to prevent companies and qualification acquirers from borrowing or lending their licenses as well as establish a penalty rule for investigations into incense leasing after expanding the dedicated personnel for investigations into license leasing in order to prevent negligence of investigators with the Human Resources Development Service of Korea. As these solutions are not fundamental measures, it is necessary for companies and qualification acquirers themselves to raise their safety consciousness and other qualities necessary for prevention of license leasing and rental brokerage, whereas the country regulates them at the minimum level in the long term to ensure that excessive regulation of the country will not lead to abuse of power, thereby reducing the productivity of companies.

4. Conclusions

The purpose of this study is to find out the problem of the interested parties, namely the government, the Human Resources Development Service of Korea, companies and firefighting qualification holders, regarding the investigation of renting firefighting qualifications and the rental agencies from the viewpoint of the external effect, and to find ways to improve it. The viewpoints such as constructing incentive systems through the market mechanism and maintaining the optimal level by adequate supplies of social products through regulation are suggested for solutions to the externalities. The analysis of the externalities of stakeholders in firefighting qualifications based on these viewpoints shows that the regulation by the Human Resources Development Service of Korea remains nothing more than perfunctory investigations because there is no penalty rule for neglecting the investigation work for license leasing and rental brokerage.

In the short term, the penal clause should be strengthened so that companies and qualification holders cannot borrow or lend their qualifications. In addition, the Human Resources Development Service of Korea will increase the number of personnel dedicated to investigating the loaning of qualifications. It is necessary for the government to establish a penalty for neglecting to investigate the lending of qualifications for the Human Resources Development Service of Korea. In the long term, the state needs to make only minimal regulations. Also, the state needs to make companies and qualification holders feel like they benefit more when they are not borrowing or lending qualifications. The anticipated effect of this study is that the government will

intervene appropriately by applying firefighting qualifications according to market principles, which are external effects. It can also be used as a basis for the revision of related laws on the renting of national technical qualification certificates and the investigation of rental agencies. It is necessary to redefine the roles of the government and the Human Resources Development Service of Korea through 'capture theory', which is a problem that can be expressed as a result of excessive intervention of interest groups.

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