The Entity Responsibilities of Highway Emergency Management and the Establishment of “Tri-combination” Mechanism

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In recent years, highway emergencies occur frequently in China. These emergencies make the public’s confidence in the government suffer from trials and tribulations, while giving huge economic losses to the society. Compared with western countries, one important season for lowering highway emergency management capacity in China should be attributed to the multicultural operating entities and multi-agent management mechanism, resulting in responsibility dislocation or deficiency, sluggish actions and inefficiency. Therefore, it is extremely important to clarify the entities of highway emergency management. First of all, the paper elaborates the necessity of multiple investors on the highway, figures out different responsibilities of multiple agents from the double perspective of sociology and economics and finally proposes the “tri-combination” mechanism, namely “combination” of uniform highway emergency management organizations; “linkage” of effective social mobilization mechanism; and “joint service” of unifying social force.

Keywords: Highway; Emergencies; Emergency Management; “Tri-Combination” Mechanism.

1. Introduction

Developing highway is the inexorable trend of modern social. The total distance of highway in China has already reached 120000 kilometers until the end of 2015 and ranked in the first place around the world [1]. However, highway also brings a serious threat to people’s life, property and public safety, due to the increasing tendency of emergencies’ frequency and strength. Thus, it is an urgent difficulty to how to establish a sound highway emergency management mechanism for emergencies and improve emergency management ability. Lagging action and inefficiency in related departments are attributed to unclear
boundary of entities in highway emergency management in China and ambiguous division of labor for entity responsibilities. Thus, emergencies may not be solved effectively or even have negative effects of outward expansion.

2. Unclear Emergency Entity Responsibilities in Highway in China

2.1 *Separation between diversification of investors and emergency entities*

The management master—Peter F. Drucker proposed the concept of “new privatization” in 1969 theoretically. In the 1970s and 1980s, guided by the Britain and the U.S., a wave that was government-dominant, had the entities of marketization and socialization, had the standard of satisfying the public, and aimed at breaking through government monopoly and introducing market competition mechanism, and promoting privatization reform in governmental public sectors was developed around the world. Under such background, combining with rapid development demands and limited governmental capital on highway in China, diversification of highway investments becomes an important supply method. However, investors of diversification have larger performance difference in assuming highway emergency management responsibilities. The government has a stronger initiative in emergencies, while private capital is lacking of power to engage in emergency management for larger capital costs and slow effects. What’s more, based on the characteristic requirements for integrality and globalization of highway road network, the initiative difference of emergency management will intensify the lower emergency management efficiency.

2.2 *Lacking of emergency management entities with unified command and coordination*

At present, the highway emergency management is participated by non-subjected relevant departments in line with respective responsibilities, but there is no authorized organization that conducts uniform command, coordination and supervision on these departments. Thus, departments may not give a response reaction, cooperation degree of emergency management is lower, and emergency coordination is not harmonious, resulting in occurring lower emergency efficiency occasionally. In addition, judgment standards of judging emergencies are different and corresponding emergency measures taken also are different, due to diverse management functions and benefits of relevant departments in highway. Department entities perform in their own way and act
as they please, but there are no overall situation and integrity and are lacking of uniform command, resulting in impacting quality and effects of emergencies.

To sum up, investors and management system of highway are totally different. Under such the management pattern, when highway takes place some emergencies, such the management pattern may cope with common emergencies. However, it is hard to adapt to crisis emergencies with wide coverage [2].

3. Clarification of Highway Emergency Entity Responsibilities Based on the Double Perspectives

3.1 Clarification of responsible entities from the sociological perspective

The clarification of social relations is the precondition of solving highway emergencies and improving emergency management. Typical opinions in sociology include the following two aspects.

One is the social crisis management. In the public governance process of modern western countries, high participation of various social organizations and common people, self-governance and social self-governance of social multiple centers, development of various social organizations and mechanisms out of the government, as well as diversification of governing subjects and governance mode have already become facts. In practice, governments at all levels spare no efforts to realize the good cooperation among governments, society, public sectors and private sectors, realize the high participation in crisis management of common people, social organizations, and business enterprises, and constitute the social crisis management mode [3].

The other one is the public relation theory. The theory thinks that in the crisis management of emergencies, it is necessary to pay attention to applying the principles and methods of public relations to cope with crisis. In practice, some principles, ways, methods and strategies of the public relations are widely applied in the crisis management and are highly effective. In recent years, with the frequent occurrence of crisis emergencies, the unique role of PR means on crisis answers and management is gradually realized by people.

From the perspective of sociology, it is necessary to value the responsibilities of multi-agent integration in emergencies. In the highway emergency management of emergencies, it is necessary to unify effective coordination and operation of departments under the guidance of government and develop enthusiasm of departments.
3.2 Clarification of entity responsibilities from the economic perspective

The paper explains that the participation of multiple agents from the economic perspective conforms to the tendency of theoretical and realistic practice, but it doesn’t indicate that how to conduct standard analysis of entity responsibilities. However, the economic perspective exactly compensates for the defects.

Public goods are the materials determined by integrated political selection, instead of individual market demands, namely any product or service is regarded as the public goods determined by the government to provide for users for free or at a low cost [4]. Public goods in highway emergency can be arranged from separability to inseparability, including public goods with physical forms, public goods with service forms, and public goods with institutional forms. For example, relief goods, it can be consumed separately. On the other hand, legal legislation of emergencies has inseparability. In the pre-stage and post-stage, public supply mode under the normal state is reasonable, but social setting parts or all parts in mid-stage lose efficiency. People may not satisfy demands through normal approaches, but only can depend on intervention of external force or acquire public goods through political or administrative means [5].

In a sense, mid-stage emergency measures and product supplies have stronger publicity and are provided by the government uniformly. Pre-stage and post-stage products or service supplies can be assumed by diversification under the governmental supervision.


In the highway emergency management, it is necessary to do diversified participation. Based on it, the paper proposes the “tri-combination” mechanism and explains it from entities, social subjects and how to implement.

4.1 Combination: establish definite cooperation mechanism of emergency responsibilities

At present, the highway emergency management is completed by multiple departments together, including road administration, medical treatment, traffic police and fire prevention, etc. Under the realistic situation of diversified investors on the highway, private investments also should assume the emergency responsibilities before emergencies and after recovery. It is necessary to fulfill responsibilities in emergency management in emergency capital, goods and materials, personnel and equipment. Only to begin with investors and external
cooperative organizations and establish definite cooperation mechanism of emergency responsibilities for departments can improve emergency efficiency of highway effectively.

4.2 Linkage: establish effective cooperation mechanism of emergency management

From the perspective of American, German and Japanese highway emergency mechanism, the management cooperation between organizations is the key in institutional construction, except that top governmental mechanism is regarded as the core decision [6]. The linkage of highway emergency management refers to bringing departments (including finance, public security, fire protection, emergency treatment, traffic police, public utilities, hygiene and armed police) and related resources into the uniform command and dispatching system. Therefore, in the highway emergency management, methods, such as organizational agreement, boundary leap, common learning and emergency drilling, can reinforce management cooperation between departments, connect with management system, objects and targets involved in organizations effectively, and promote entire ability of emergency linkage organizations.

4.3 Joint service: establish scientific cooperation mechanism of emergency behaviors

The highway emergency disposal needs different organizations to participate together, namely various professionals can cooperate mutually. Particularly, after combination and linkage problems of emergencies are solved, it is necessary to do seamless connection with specific emergency schemes, operation process and behaviors and enable different organizations and professional emergency personnel on the spot to cope with emergencies orderly. Thus, government departments should adopt “combination” to define responsibilities between organizations, apply “linkage” to cooperate with management work between departments, and utilize “joint service” to deal with emergency behaviors of disposal personnel. This will promote systematization and institution of emergency management, so as to promote entire emergency capacity of the government and realize the target of securing safety and smoothing roads on the highway.

5. Conclusions

The paper figures out the entity responsibilities in highway emergency management from the perspective of sociology and economics and proposes the
“tri-combination” mechanism that realizes the reasonable division of labor and clear responsible distribution under the highway emergency management in multiple agents.

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