Bureaucratic Accountability and Disaster Response: Why Did the Korea Coast Guard Fail in Its Rescue Mission During the Sewol Ferry Accident?

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The Sewol ferry accident, occurring in the ocean in South Korea on April 16, 2014, resulted in the loss of 304 lives. Some argue that one of the primary reasons for such an excessive death toll was because the post-disaster rescue operations led by the Korea Coast Guard (KCG) were neither timely nor efficient and effective. In this study, we attempt to understand whether there was any systemic cause behind such an unsuccessful disaster response on the part of the KCG. In doing so, we analyze the KCG’s aptitudes, attitudes, and behaviors vis-à-vis its rescue operations in the broader context of Sewol ferry disaster management, while utilizing the classic theories of bureaucratic accountability. We conclude this research by arguing that the KCG was more concerned about hierarchical, political, and legal accountability than professional accountability in the midst of the accident, and discuss theoretical and practical ramifications of our findings.

KEY WORDS: Sewol ferry, bureaucratic accountability, disaster response, rescue operations

Introduction

On April 16, 2014, the Sewol ferry, owned and operated by Chonghaejin Marine Company (CMC), sank in the ocean nearby Byeongpungdo (i.e., Byeungpung Island) in South Korea on a voyage from Incheon to Jejudo (i.e., Jeju Island). As a result, 295
passengers on board died and 9 passengers went missing. Since then, many have been questioning the causes of, and the responses to, this accident. Among the causes under speculation is the overloading of cargo and passengers—which was possible due to the construction of extra passenger cabins beyond the original loading capacity of the vessel—triggered by the CMC’s intent of profit maximization and compounded by ineffective government oversight of related safety issues. Such ineffective oversight seemed possible mainly because of long-standing ties between a number of government bureaucrats and the CMC. Additionally, conjectures have arisen regarding how improper responses dealing with the sinking and capsizing ferry ship resulted in much preventable loss of life, from a post hoc disaster management perspective. Included amid these conjectures are the lack of professionalism and negligence of duty on the part of the ferry captain and some crewmembers in response to the emergency, and most crucially, the untimely and ineffective rescue operations led by the Korea Coast Guard (KCG).

There is no doubt that some of these causes and inadequate emergency management practices under scrutiny had a critical and direct impact on this calamitous event. However, overemphasizing personal-level responsibility in an incident of this sort, including government bureaucrats, the business leaders of the CMC, and the captain and crewmembers of Sewol ferry, would entrap the public in the "bureaucrat-bashing" (McSwite, 2005). Such individual level scrutiny would temporarily lessen public outrage regarding the tragedy, but hamper us from comprehending it more systemically. As such, it is equally important to understand the institutional aspects of such cataclysmic events from an ex post disaster management perspective.

Many have claimed that one of the major reasons for the excessive number of fatalities in the Sewol accident was the KCG’s ineffective response during rescue operations (Joongang Daily, 2015). According to the report from the special prosecution released in May 2014, for instance, the KCG could have saved more passengers had the rescue crew entered the ship immediately after arriving at the site of incident (Korea Board of Audit and Inspection, 2014; Korea Prosecution Service, 2014; Korean Maritime Safety Tribunal, 2014). The captain of the KCG’s patrol vessel on duty was given a four-year prison sentence for his negligence in initiating prompt rescue operations. However, the question still remains whether total responsibility can be attributed to the captain of one small patrol vessel. This research probes into systemic cause behind the unsuccessful disaster responses from the KCG. In doing so, we analyze the KCG’s aptitudes, attitudes, and behaviors vis-à-vis its rescue operations in the broader context of Sewol ferry disaster management, while utilizing classic theories of bureaucratic accountability.

The remainder of this paper is structured as follows: the next section offers conceptual definitions and an analytical model of bureaucratic accountability while referring to the studies of Romzek and Dubnick (1987) and Romzek and Ingraham (2000). Grounded on Romzek and Dubnick’s model (1987), the sections that follow, then, discuss accountability emphasis within the KCG from an organizational perspective, and the KCG’s reactions to the Sewol ferry accident.
The final section summarizes the analytical findings from which we will draw our theoretical and practical implications.

Bureaucratic Accountability

As the importance of the role of government bureaucrats has increased in various phases of policy and administrative processes, researchers have begun to direct attention to the concept of bureaucratic accountability (Cleary, 1980). However, a precise analysis of bureaucratic accountability is not an easy task. Definition of accountability is composed of various conceptual components, and the relationships among those components are not only complex but continuously changing, contingent upon various distinctive administrative contexts (Drott et al., 2013; Oliver & Drewry, 1996). In fact, Magetti and Verhoest (2014) argue that bureaucratic accountability in a particular society or country is a historical construct generated with the establishment of a country-specific bureaucratic institution. This means that the conceptual definition and scope of accountability can be diverse due to the endemic and historical courses of national and institutional development. Nonetheless, accountability is considered one of the most important concepts in public administration (Huber & Rothstein, 2013; Marchant, 2001; Matten, 2004; Rothstein, 2003). More specifically, bureaucratic accountability is an essential standard for government service and is recommended for system wide institutionalization (Mulgan, 2000).

What is bureaucratic accountability? Rosen (1998) explains that the essence of bureaucratic accountability parallels with the citizens’ interest in how bureaucrats exert power. Similarly, Gormley and Balla (2004) emphasize fairness as a core value embedded into the concept of bureaucratic accountability. They argue that as a group, bureaucrats often are not democratic representatives. Therefore, fairness ought to be the core value of bureaucratic accountability in the formulation of policy decisions and administrative practices. Bureaucratic accountability refers to “desirable” attitudes, aptitudes, and behaviors of government agencies expected for the pursuit of the welfare of their citizens.

Romzek and Dubnick (1987) suggest a more deliberate conceptualization of bureaucratic accountability as an effective analytical framework enabling a systemic examination of bureaucratic behavior. They emphasize four important conceptual dimensions of bureaucratic accountability, including hierarchical, legal, professional, and political dimensions while analyzing the case of the 1986 Space Shuttle Challenger disaster in the United States. Synthesizing previous arguments, Romzek and Ingraham (2000, p. 242) further claim that four conceptually distinctive types of bureaucratic accountability (i.e., hierarchical, legal, professional, and political accountability) are often grounded in two fundamental organizational contingencies: (i) degree of bureaucratic autonomy and (ii) source of expectations and/or control over bureaucratic behavior.

Hierarchical accountability is more likely to be emphasized in an organizational environment where there exists a low degree of bureaucratic autonomy to deal with internal expectations. This type of accountability is often characterized by
an organizational setting wherein its members attempt to respond foremost to the expectations of top managers or higher rankers within a vertical and internal control system. Likewise, organizational members’ performances are evaluated by how well they conform to written regulations, orders, and standard operating procedures.

Legal accountability becomes prevalent in an organizational contingency where the degree of bureaucratic autonomy is low and the source of expectation and bureaucratic control is external. Legal accountability often emerges in a situation where outside organizations in government bodies (excepting the executive branch), such as the legislature and judiciary, have constitution-bounded legal authority over executive agencies’ administrative practices. These outside organizations can exert their legal authority through various institutional arrangements for which executive branches are to be accountable, including open hearings and audits.

When autonomy is high and expectation comes from outside of the organization, political accountability is often considered important. Public officials, for instance, should respond to voters’ requests, even though the voters do not have legal authority. Likewise, bureaucrats are held accountable to politicians, elected public officers, interest groups, and public opinion (Romzek & Dubnick, 1987).

Professional accountability is based on high bureaucratic autonomy and internal expectations where technical experts within an organization help public managers apply the knowledge and skill that is needed to fulfill their duties. Professional accountability gains more importance, when government bureaucracies have to deal with more complex and uncertain issues and technical experts require more discretion as politicians and public managers begin partially delegating their primary accountability (e.g., political accountability) to such experts (e.g., professional accountability). Experts are expected to be considerate of moral or ethical responsibility in a broader scheme of principal-agent relationship, as well (Dicke & Ott, 1999).

Romzek and Dubnick (1987) argue that the emphasis on a specific type (or combination) of bureaucratic accountability within an organizational setting is influenced by three major factors: institutional context of organization, manager’s strategic motivation, and the nature of tasks. Ideally, government agencies are expected to equally sustain these various types of accountability when performing their organizational tasks. However, in reality, depending on the parameters of the three aforementioned organizational characteristics, agencies’ accountability configurations vary, while, more often than not, disproportionally emphasizing one or two more dominant dimension(s)—or type(s)—of bureaucratic accountability in their daily administrative practices. For example, professional accountability would be considered the most important type of bureaucratic accountability within those government agencies whose primary tasks frequently involve highly scientific and technical matters, such as the U.S. Food and Drug Administration (FDA) and National Aeronautics and Space Administration (NASA). Furthermore, within the same government agency, those in top manager positions are more likely than middle managers or street level bureaucrats to
emphasize political accountability, while aiming to maintain responsiveness toward key external stakeholders. This discussion is summarized in Table 1.

**Accountability Structure in the Korea Coast Guard (KCG): An Organizational Perspective**

Romzek and Dubnick (1987) further explain that the three factors above are the determinants for which particular type(s) of accountability ultimately gain preference over others in the performance of organizational tasks. In this section, we attempt to understand the KCG’s accountability structure from an organizational perspective, while focusing on how its institutional context and organizational leadership have historically informed the emphasis on hierarchical and political accountability within the KCG which often contradicts the nature of its primary tasks. In doing so, we pay particular attention to the KCG’s organizational settings from a historical institutionalism perspective, which in essence claims that the nature of institutions—conceived of as formal and informal rules, norms, and culture as the products of historically iterative reinforcement of initial institutional character—affects organizational actors’ behavioral decisions (Berman, 2013).

**Sustaining Hierarchical Accountability**

Historically, the KCG has maintained a very similar character to the South Korean navy, which itself focuses on maritime security rather than emergency management. After independence from Japanese rule in 1945, the “modern” South Korean navy needed to defend its national sea jurisdiction and later intercept infiltrators sent by North Korea to the South. In addition to sustaining national security through these activities, the navy was also responsible for inspecting Japanese fishing boats crossing the sea border (Roh, 2011) to protect the South Korean fishing industry. However, such practices by the Korean navy could be interpreted as invasive military action as, conventionally, a foreign ship is considered a part of foreign territory, which could generate rising military tension with a neighboring country. Accordingly, the KCG, which used a similar rank system to the Korean navy as a part of the Maritime Police Unit within the National Police Agency in South Korea, was founded in 1953 to substitute for the Korean navy’s duties of inspecting civilian ships (KCG, 2013c) while not instigating any unnecessary potential international conflicts. Because of these
origins and its organizational nature as a police unit, hierarchical accountability, in which members are judged by how well they obey commands, has long been emphasized within the KCG.\textsuperscript{2}

As long as North Korea was hijacking South Korean fishing boats and Japanese fishing boats engaged in fishery activities near the Korean coast in the 1960s, when there were no clearly defined jurisdictional maritime borders, the KCG had to implement frequent sea patrols. Following the Korean–Japanese Fisheries Agreement in 1965, however, this inspection role, especially against Japanese fishing boats, gradually waned, as the agreement encompassed the establishment of a clear jurisdictional demarcation of the sea between South Korea and Japan. The KCG instead assumed the tasks of criminal investigation and law enforcement in the sea with the Maritime Police Force Act in 1962 (KCG, 2013c). The KCG increasingly concentrated on policing against violent crime and maritime pollution.

Shifting and varied geopolitical situations in the 1990s necessitated the KCG to refocus its role toward inspection and patrol. A temporarily peaceful mood was fostered by the inter-Korean reconciliation and peace agreement in 1992. In 1992, South Korea established diplomatic ties with the People’s Republic of China, which inadvertently encouraged the development of an illegal Chinese fishing industry in Korean waters (Roh, 2011). Prior to the United Nations Convention on the Law of the Sea, passed in 1994, South Korea had no authority regarding maritime borders, but with this convention, all countries were granted special rights over the use of marine resources in an exclusive economic zone (EEZ) extending 200 nautical miles from their shores (KCG, 2013a). With the recognition of the growing importance of sea resources, the KCG became an independent agency in 1996 as a direct countermeasure against Chinese illegal fishing (KCG, 2013c). Since that period, the primary role of the KCG, as an independent government agency, has remained inspection and patrol. The KCG has expanded the size of its budget 5.2 times since 1996 and established many local branches, including 16 coast guard stations, 87 substations, and 240 local offices, along with the KCG Academy (KCG, 2013c). Meanwhile, the KCG, along with its military origin and continued duty of inspection and patrol, has sustained the hierarchical accountability of its core accountability structure.

\textit{Emphasizing Political Accountability}

The KCG also became inclined toward political accountability as it shed the characteristics of the Korean navy and assumed those of a government agency. Typically, Korean bureaucracy has been fully supported by political elites. Bureaucrats and political elites have maintained a close communication system for the exchange of exclusive information (Im, Campbell, & Cha, 2013). Likewise, top managers within the KCG organizational hierarchy are typically more responsive to politicians, a key external stakeholder who may hold influence on its organizational sustainability by exercising government budget and personnel decision-making power, than to any other potential stakeholders, such as the
issue public or related for-profit or non-profit entities, involved in various administrative practices. Due to such emphasis on political accountability, maritime security, including inspection and patrol, have become the primary priority for the KCG over any other duties to external stakeholders, though the KCG has been responsible for various additional duties, including search and rescue, marine environmental protection, maritime traffic safety management, and maritime pollution response (KCG, 2013a). Three specific contingencies illustrate why the KCG was inclined to prioritize political accountability: (i) the increasing illegal fishing activities of Chinese ships; (ii) the “jurisdictional” conflict with the National Police Agency; and (iii) the dispute over equitable distribution of the increasing police human resources pool allocated by South Korean central personnel authorities.

First, the problem of illegal fishing by Chinese ships has strongly influenced the KCG’s focus. Material and financial damages suffered by Korean fishing boats have underscored the ongoing importance of this task, and the media has continuously emphasized the problems caused by illegal Chinese fishing boats (Park, 2014; Yonhap News, 2012). This has also been a prime opportunity for the KCG to promote itself. News images, as well as documentary films portraying the hardships of staff patrolling waters against illegal Chinese fishing boats, were produced with the KCG’s assistance (Korean Broadcasting System, 2012; Munhwa Broadcasting Corporation, 2011). Shocked by these dire scenes, members of the general public began to call for better equipment for KCG operations, which translated to more justifiable resources for the KCG.

Politicians and legislators fell under pressure from fishermen, whose livelihoods were under threat and who fully supported the KCG as their “guardians.” As a result, while attempting to become more politically accountable to its various external stakeholders, the function and organization of the KCG became increasingly hinged upon meeting maritime security obligations, to the detriment of other duties, including maritime search and rescue missions. For example, the KCG’s budget for search and rescue missions in 2013 was about 9 million U.S. dollars, which constitutes only 1.6 percent of its total annual budget of 1.5 billion U.S. dollars. Meanwhile, in the same year, the KCG spent approximately 300 million U.S. dollars on maritime security (KCG, 2013c). The KCG’s annual report released in 2014 also shows that much of new personnel recruitment was related to the maritime security mission: 3,700 newly hired personnel (42.6 percent of total recruits) were assigned to maritime security. In contrast, only 482 personnel (5.6 percent of total recruits) were assigned to search and rescue functions. In addition, the KCG had purchased heavy vessels and aircraft rather than basic rescue equipment for search and rescue. It turned out later that 52 out of 328 field offices that take first action, when maritime accidents occur, did not have basic rescue equipment, such as patrol boats or jet skis (Korea Board of Audit and Inspection, 2014).

Second, another major issue contributing to the KCG’s orientation toward political accountability involves its “jurisdictional” conflicts with the National Police Agency, which have further encouraged the KCG to focus on “powerful”
As discussed briefly, although the term “Korea Coast Guard” has been used since 1991, the KCG resided under the National Police Agency until 1996, the year when it became an independent government agency for the first time. For instance, from 1986 to 1989, the KCG assumed control over incoming and outgoing sea vessels, which previously were under the jurisdiction of the National Police Agency. However, the line of authority and responsibility between the two governmental entities was murky due to a lack of legal clarification during the structural reorganization process. In fact, a policy study regarding the restructuring of the KCG’s branch offices led by the Korean Association for Policy Studies (2013) found—that even some chief officers of the same KCG substation were unclear about their jurisdiction and interpreted it quite differently. One of the main goals of the KCG, as a government entity holding its own organizational “sovereignty,” was to establish a clear-cut line of authority and responsibility for itself, independent from the National Police Agency. For that end, the KCG needed more political support from its stakeholders, notably legislators, in exchange for a high degree of political accountability.

Third, the KCG has also stressed political accountability in order to justify and bolster its crusade for a better share of the recently expanded pool of police human resources allocated by central personnel authorities. One of the promises extended by current South Korean president Park Geun-hye (2013–present) during her presidential election campaign involved the recruitment of 30,000 new policemen for the purpose of strengthening national security. However, the specific distribution of these human resources between the National Police Agency and the KCG was not specified in the campaign pledge. A lack of personnel and equipment remained the biggest problem in the KCG, even though it had over 10,000 personnel, 300 ships, and 23 aircraft. Therefore, the campaign pledge of the President was a crucial opportunity for the KCG, which had long suffered difficult working conditions in comparison with the National Police Agency.

A survey of a total of 325 KCG representatives from each of 87 KCG substations and 238 local offices conducted in 2014 confirms our findings. According to this survey, 75.5 percent of the respondents answered that the current number of personnel for the KCG’s vital tasks is insufficient. Statistics from the KCG (2013c) White Paper also show that equipment is insufficient. Among 87 substations, only 53 substations have patrol ships, which are the most important equipment for search and rescue missions at sea. The KCG managed to increase by 10,000 personnel in 2014. To achieve these numbers, the guard was compelled to lobby legislators and earn political support to justify their quest.

The KCG’s accomplishment of becoming an exemplary institution of the Balanced Scorecard (BSC) in 2006 is one earlier example of its efforts to gain political influence. The KCG was the first institution in the public sector to accept the BSC (in 2003), even though this required significant reform of their personnel system. The BSC was one of the main policies of the Rho Moo-Hyun administration (2003–2008) but many other government agencies were initially unwilling to
accept the policy because they were wary of its effects. The case of the KCG was broadly touted as a good BSC model by the media.

Weak Professional Accountability

The low priority status of the Maritime Pollution Response Bureau within the KCG reflects that professional accountability was not appreciated in the KCG. One of the chief tasks of the KCG was the prevention of marine pollution and the management of related risks and hazards. The Maritime Pollution Response Bureau in the KCG oversaw accident prevention and disaster response related to sea pollution. However, the KCG did not provide enough human resources for the bureau, allowing it only 4.1 percent (334 personnel) of the total KCG personnel allocation in 2012.9 After the Marine Pollution Control Office, with a staff of 97, was established in 1978, the number of personnel was increased to 192 in 1981, to 204 in 2004, and to 334 in 2012. This rate of growth reveals a great disparity in comparison with the rapid increases in staff within the other bureaus of the KCG. For instance, the number of police personnel was increased to 3,605 in 2004 and to 10,095 in 2012 (KCG, 2013a).

The Maritime Pollution Response Bureau was staffed not with police officers, but with civil service employees who presumably hold professional expertise in dealing with various sea pollution issues. However, the civil service employees rarely had any opportunity to demonstrate their own abilities and skills to manage related disasters, such as the Hebei Spirit’s—a Hong Kong registered crude carrier—10,800-ton oil spill occurring in the Yellow Sea (Hwanghae) of South Korea in 2007, an issue compounded by the lack of budgetary and personnel support from the KCG to deal with such a catastrophic accident. According to a survey of 276 personnel of the Maritime Pollution Response Bureau conducted by the KCG in 2011, 235 (or 88 percent of) survey respondents answered that they wanted to switch to police positions because they felt unfairly treated in promotion, did not have proper authority to conduct their jobs, and were alienated by police officers (KCG, 2013a).10 When civil service employees changed positions11 and entered the job rotation system with police officers, their existing specialty in maritime pollution was increasingly compromised.

Relatedly, the research and development center in the Maritime Pollution Response Bureau conducted only 20 percent of analyses regarding evidence of oil pollution. The remainder of related analyses, which require thorough evaluation, were consigned to outside institutes such as the National Scientific, Criminal and Investigation Laboratory. Additionally, original research done by the research and development center comprised only about 15 percent of the total; the other 85 percent of studies involved simple analysis tasks such as the chemical analysis of polluted water and the maintenance of protective suits (KCG, 2013a). The personnel in the research and development center were required to possess at least 5 years of research experience, but the majority moved to other departments within 2–3 years (KCG, 2013a) of appointment because many of them were
disappointed by the poor working environment and lacked the motivation to continue their careers in the area.

This description of the Maritime Pollution Response Bureau case exemplifies the possibility of the KCG holding a somewhat unbalanced bureaucratic accountability structure wherein professional accountability was undermined. This characteristic of KCG’s accountability structure was sustained through its rescue operation practices. Though the annual number of ships and boats involved in maritime accidents—ranging from 818 to 1,197 had never shown any significant decrease from 2009 to 2013, for example, the KCG allocated only 1.86 percent of its total annual budget in 2014 and only 8.7 percent of its newly added personnel during the 2006–2014 period for the purpose of rescue operations, not to mention its provision of insufficient rescue tools and devices, including the failure to provide a helicopter devoted to rescue activities (Lim, 2014). Furthermore, the KCG has never implemented organization-wide rescue drills and exercises for improving its skills for rescue operations in emergency situations—its annual drills were mostly dedicated to strengthening its maritime security and policing activities (Kee, Gyuchan, Patrick, & Haslam, 2017).

Based upon this discussion as to why and how the KCG, as a government organization with its own origins and history, has sustained its emphasis on hierarchical and political accountability to the detriment of professional accountability, in the following sections, we attempt to apply this background knowledge to achieve a deeper understanding of the KCG’s aptitudes, attitudes, and behaviors vis-à-vis its rescue operations in the broader context of the Sewol ferry disaster management case.

The Sewol Ferry Accident

The Sewol ferry accident occurred in the ocean near Byeongpungdo in South Korea at 8:48 in the morning on April 16, 2014. The 6,825-ton ferry carrying 476 passengers and crew capsized en route from Incheon to Jejudo. A total of 304 of those passengers died when the vessel sank. At 8:30 a.m., the Sewol passed through the middle of the Maenggol Channel, which has one of the strongest underwater currents in the ocean surrounding the Korean peninsula. According to the recorded track data and crewmen’s testimony, the ferry, laden with heavy cargo, entered the channel at a high rate of speed and maneuvered a zigzag to maintain the ship’s balance. The ship made a sharp turn to resume its normal course and the cargo, cars, and containers, which were not securely tied, tilted to the left side of the ferry. The ship lost stability and began to sink (Korean Maritime Safety Tribunal, 2014).

The first distress call from a passenger reached the Jeollanam-do fire station at 8:52 a.m., but the fire station did not promptly handle the passenger’s call. The crew of the ferry made their first distress call to the Jeju vessel traffic service at 8:55 a.m. It was not until after the Mokpo KCG station accepted a distress call at 8:58 a.m. that the Jindo vessel traffic service began communication with the crew at 9:06 a.m. At 9:30 a.m., the first rescue helicopter and coastal patrol vessel
arrived at the accident site. Civilian fishing vessels began to gather. The ferry had already listed about 45 degrees (Korean Maritime Safety Tribunal, 2014).

The KGC’s coastal patrol vessel No. 123, the first government rescue ship to reach the site after the incident, announced for 5 minutes via loudspeaker for the *Sewol* ferry passengers to abandon ship. The coastal patrol vessel began rescue operations at 9:38 a.m. with the dispatch of a rubber boat, but communication between the *Jindo* vessel traffic service and the ferry was disconnected at that very time. The left side of the ship completely sank at 9:54 a.m. At 10:00 a.m., 110 passengers, most of whom had abandoned the ferry ship and jumped into the ocean, were rescued. Meanwhile, over the next 15 minutes, the ferry’s communications officer repeatedly ordered his passengers not to move via the ship’s intercom system. When the KCG rescue crew’s order to abandon ship reached the passengers inside, it was difficult for them to escape, since the body of the ship had tilted more than 60 degrees. The ship completely sank at 11:20 a.m., except for the bow, and only the 172 people who had jumped overboard were rescued (Korea Board of Audit and Inspection, 2014; Korea Prosecution Service, 2014).

**The Korea Coast Guard Reactions to the *Sewol* Ferry Accident**

Local first responders are the key element in rescue operations and exert a large impact on the degree of damage, including the number of casualties, in an accident. The case of the *Sewol* ferry accident shows that there were missed opportunities for the KCG to reduce the number of casualties, revealing a lack of preparedness on the part of local first responders. Not only the local first responders, such as the coastal patrol vessel No. 123, the *Jindo* vessel traffic service, the *Mokpo* Coast Guard, and the *Jeju* Coast Guard, but also the KCG as a whole did not properly prepare for and respond to the accident. We argue that part of the reason for such unsuccessful responses to this emergency situation was the KCG’s organization-wide accountability structure that overemphasizes hierarchical, political, and legal accountability, trivializing professional accountability. We elaborate this point of argument in the following subsections.

*Weighing Hierarchical Accountability*

In the midst of the *Sewol* ferry accident, every involved bureaucrat looked upon hierarchical accountability as highly important; the highest ranking officers continuously gave orders, middle managers delivered those orders, and at the scene of the accident, the lower ranking officers and street level bureaucrats singularly obeyed them. As a result, the KCG staff, without a thought to implementing their own discretionary rescue-related decisions and actions, which oftentimes can be more effective than “just” following orders issued from above, devoted their attention solely to the highest ranking reporting agencies. Encountering undesirable consequences during the rescue operations, accordingly, no one took responsibility at the accident scene, instead pointing to the upper level of command and control organizational hierarchy. A recorded tape of
the communication between patrol vessel No.123 and the KCG station reveals that the crew of the patrol vessel did not immediately board the ferry (Korea Prosecution Service, 2014). Though the patrol vessel arrived on the scene at 9:30 a.m., the KCG station waited until 9:48 a.m., 18 minutes after their arrival, to command them to go onboard. The KCG crew on the patrol vessel lost a crucial window of opportunity to save more passengers, not only because they were late to board the ferry, but also due to their inability to access the passengers’ quarters (Korea Board of Audit and Inspection, 2014). One crewman of the patrol vessel attempted to enter the cabin at 9:49 a.m., when the ship was tilted about 62 degrees. However, he soon abandoned his mission, stating that the severe tilt of the ferry made entry impossible (Chosun Ilbo, 2014; Joongang Daily, 2015). From this point onward, the rescue crew was only able to rescue those passengers who had jumped off from the ferry ship.

According to the recorded tape, the first report from the KCG patrol vessel was at 9:44 a.m. (Korea Prosecution Service, 2014). It stated, “The passengers are not getting out of the ship because the ship is tilted too much. We are saving the passengers outside one by one.” Four minutes later, the patrol vessel reported again, “We are anchored alongside the left side of the ferry, but the passengers cannot descend from the ferry because of the steep slope. The ferry is about to sink.” The KCG West Regional Headquarters finally ordered that the crewmen of the patrol vessel go inside the cabin and calm the passengers. However, it was too late and the answer from the patrol vessel was the same: “We cannot go inside the ferry because of the steep slope.” Then, at 9:57 a.m., the chief of the Mokpo Coast Guard asked the patrol vessel to call over a loudspeaker for the passengers to jump out of the ferry. The reply from the patrol vessel was unaltered: “The passengers cannot jump from the ferry because the left side is completely sunk. Only rescue by helicopter might be possible.” At 10:05 a.m., the chief of the Mokpo Coast Guard again ordered the crew to call over loudspeaker for the passengers to jump. However, the patrol vessel gave no response this time. Finally, the ferry tilted 77.9 degrees at 10:10 a.m., and turned over 108.1 degrees at 10:17 a.m. (Korea Board of Audit and Inspection, 2014; Korea Prosecution Service, 2014). This timeline leads to the inference that the orders from the KCG West Regional Headquarters were neither timely nor appropriate during the rescue operations; they should have given the order for rescue crews to enter the sinking ship immediately after the incident was reported. To make matters worse, mainly due to hierarchical accountability concerns, the captain of the patrol vessel did not make any prompt discretionary decisions to rescue the passengers upon arrival at the scene with his rescue team during the vacuum of timely orders passed down the line of command within the KCG’s organizational hierarchy (Korean Maritime Safety Tribunal, 2014). Finally, the KCG West Regional Headquarters made delayed orders, but they were not feasible for rescue crews to implement. Again, instead of suggesting and executing alternative means to help those passengers in the sinking ship, the rescue crews responded to their commanders in a passive manner while repeating that the orders were impossible to follow.
Prioritizing Political Accountability

On the morning of April 16, 2014, when the Sewol ferry sank, fulfilling those duties that would garner political accountability for gaining extended political support from its much broader external stakeholders was still the first priority for the KCG. Even with the occurrence of such an accident with potentially calamitous consequences, all medium-sized coast guard vessels were mobilized to intensely guard against illegal fishing by Chinese fishing boats. On the course of the Sewol ferry, there was only one small vessel with 13 crewmembers, the patrol vessel No. 123 (Dong-A Ilbo, 2014). The security regulation that more than one 200 ton medium-sized coast guard vessel must be located in the inland sea was not obeyed. Consequently, for 2 hours, the captain of one small patrol vessel had to take on-the-spot commands for saving 476 passengers in a life-and-death emergency. There were only nine rescue personnel on the patrol vessel, which had no satellite communication device.

The KCG seriously considered political accountability in the actual process of the rescue operations, as well. A number of episodes show that the KCG attempted to avoid blame from key outside stakeholders, such as politicians, elected public officers, and the general public. During the accident, no one within the KCG was willing to assume any “risk” for making immediate evacuation decisions that could have resulted in undesirable consequences. Instead, everyone awaited their superiors’ initiation of rescue orders and action during the very short window of opportunity for a successful rescue operation. The Jindo vessel traffic service and the Sewol ferry shifted responsibility for the evacuation decision to one another. Surely, the captain of the Sewol ferry should have made such a decision immediately after the ferry began to sink. Yet, when the captain failed to act responsibly, the Jindo vessel traffic service, which possesses more experience with marine accidents, needed to take initiative and act as a “control tower” in place of the captain and crew of the Sewol ferry. However, the KCG never seized control of the situation.

Also, the KCG struggled to escape censure by blaming other related agencies. Other commercial vessels at Incheon harbor canceled their departures because of a thick fog at 6:30 p.m. on April 15, 2014. Only the Sewol ferry pushed ahead, with its departure two and a half hours later than the original departure time. The KCG, after receiving the weather report from the Korea Maritime and Port Administration, had finally authorized departure of the ferry and delivered their decision to the Korea Shipping Association. The Sewol ferry obtained departure authorization, although visibility on the sea was only 800 m, which is 200 m less than the regulation of 1 km visibility assurance for voyage. After the accident, the KCG stated that they authorized the departure because the Korea Maritime and Port Administration judged the weather condition as good. However, the Korea Maritime and Port Administration responded by stating that they had only confirmed the requirements for departure and that the KCG gave the final order. The Korea Shipping Association also defended themselves by insisting that they
had simply transmitted the KCG’s order to the Sewol ferry (Korea Board of Audit and Inspection, 2014).

Furthermore, the KCG announced that the Sewol ferry did not follow the safe route that the Ministry of Maritime Affairs and Fisheries recommended at the Central Disaster Prevention and Countermeasures Headquarters briefing on April 17, 2014. That is, the Sewol ferry violated government regulations. However, the Ministry of Maritime Affairs and Fisheries remarked that there was no “recommended route” in government regulations. The Ministry of Maritime Affairs and Fisheries complained, “We do not understand why the KCG talks like that and shifts blame for the accident to us.” In response, the KCG finally admitted that there was no “recommended route” (Central Disaster Prevention and Countermeasures Headquarters of Korea, 2014).

Holding Legal Accountability

In the aftermath, the Jindo vessel traffic service’s behavior exposes the KCG’s deep concern about a legislative or judiciary audit. The Jindo vessel traffic service remained very apprehensive about avoiding legal accountability. The special prosecutors discovered that the staff of the Jindo vessel traffic service fabricated the communication record to elude indictment—the chief and four staff members had removed the CCTV from inside their building and erased the recorded files. Additionally, it was eventually found that the Jindo vessel traffic service had not properly conducted sea traffic control over a long period of time. Some of the Jindo vessel traffic service staff (who were responsible for such misconduct) were later arrested and put under trial at the criminal court (Korea Board of Audit and Inspection, 2014).

The KCG also feared assuming legal accountability and focused more on their rules and regulations than rescuing passengers at risk. The Jeju Coast Guard was ordered (by the KCG) to participate in the rescue mission at 9:10 a.m. but failed to make any response, even after receiving notice of the accident from the Jeju vessel traffic service at 8:56 on the morning of the Sewol ferry disaster. Later, however, they defended themselves by responding that they had delayed the dispatch because the scene of the accident was not within their jurisdiction. In addition, a recorded tape of a telephone conversation between the Jeollanam-do fire station and the Mokpo Coast Guard revealed that the involved parties were more concerned with protocol than control of the accident. For instance, the Jeollanam-do fire station, which received the first emergency call from a Sewol passenger, waited 21 minutes to dispatch a rescue helicopter based upon their initial judgment that the marine accident was not under their jurisdictional responsibility (Korea Prosecution Service, 2014).

Lacking Professional Accountability

The KCG did not exhibit professional accountability in the face of the accident. The KCG blindly followed preset rules without discretion, attempting to
evade their organizational responsibility for rescue operations by leaning on a
private expert from the Undine Marine Industries Co., a private company
specializing in maritime engineering and salvage work. This was a consequence
of the KCG’s attempt to deal with the problem without providing its individual
bureaucrats enough discretion or representation. The KCG’s reactions during and
after the disaster are closely related with its continued outsourcing endeavors, in
which it tries to delegate not only its task-related duties but also any blame from
ill-performance of these tasks. Although the KCG had a duty to rescue the
passengers, it heavily relied on the Undine Marine Industries Co., a private entity,
from the second day of the rescue operations. At first, the KCG commented that
the Undine Marine Industries participated in the rescue operations only because
Chonghaejin Marine held a contract with that company (Korea Prosecution Service,
2014). However, the recording of the telephone conversation between the chief
and the deputy head of the KCG and the National Police Agency discloses that
the KCG already had a close connection with Undine Marine Industries. Later,
the deputy head of the KCG was called in to investigate, as doubts were raised as
to whether the KCG gave preference to the company in making its rescue
operation related outsourcing decision (Korea Prosecution Service, 2014). These
issues illustrate how the KCG, lacking expertise in rescue operations, tried to
shirk professional accountability by shifting responsibility to the private sector.

Table 2 summarizes our discussion in this section while focusing on how
KCG’s organizational environments historically shaped the character of KCG’s
accountability structure, and how such a structure translated into KCG’s
behavioral responses during its rescue operations in the midst of the Sewol ferry
accident in 2014. Firstly, the KCG, which was originally a part of the South
Korean navy organization, has mainly focused on its inspection and patrol related
duties while sustaining the hierarchical accountability inherited from its organiza-
tional origin. As a result, the lower ranking officers, such as the crew members of
patrol vessel No.123 at the scene of the Sewol ferry accident, did not take any
discretionary actions during the crucial but small window of opportunity for their
rescue operations due to their choice to continue awaiting delayed rescue orders
issued from the upper rungs of KCG’s ladder of command and control.

Secondly, a few “big” political events and related organizational circum-
stances made the KCG remain more politically oriented, alongside its motivation
for organizational growth where political support from various sources was
essential. Among such events faced by the KCG were the increasing illegal fishing
activities by Chinese fishermen, the inter-organizational conflict (e.g., with the
National Police Agency) regarding political and administrative jurisdictions, and
the rising inter-organizational competition over pulling the police human
resources allocated by South Korean central personnel authorities. As a conse-
quence, when encountering a “mundane” rescue operation situation during the
Sewol ferry accident, the KCG was not able to function properly and adeptly. In
fact, the KCG dispatched all large and medium-size coast guard vessels to patrol
the water against illegal Chinese fishing activities, violating the central govern-
ment’s security regulation that more than one medium-size (i.e., 200 ton) coast
Table 2. Important Events, KCG’s Accountability Structure, and its Rescue Behaviors During the *Sewol* Ferry Accident

| Important Events                                                                 | KCG’s Accountability Structure and Related Behavioral Tendencies                                                                 | KCG’s Rescue Behaviors During the *Sewol* Ferry Accident (2014)                                                                 |
|---------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| Foundation of KCG as a part of the Maritime Police Unit within the National Police Agency (1953) | **Hierarchical Accountability**  
The KCG station gives orders and the lower ranking officers at the scene of an accident singularly obey them without exercising any significant discretion. | The crew of the patrol vessel No. 123 awaited orders from the KCG station for 18 minutes after their arrival at the scene of incident.  
The delayed orders from the KCG West Regional Headquarters were inappropriate for the execution of effective rescue operations at the scene. |
| Establishment of diplomatic ties with China (1992)                               |                                                                                                                                                                                               |                                                                                                                                 |
| UN Convention on the Law of the Sea (1994)                                       |                                                                                                                                                                                               |                                                                                                                                 |
| Foundation of KCG as an independent agency (1996)                                |                                                                                                                                                                                               |                                                                                                                                 |
| Illegal fishing activities of Chinese ships (1992–Present)                       | **Political Accountability**  
The KCG strives for political support to expand its organizational authority and size while focusing on “big” political events rather than on “mundane” rescue operations. | The KCG did not follow the central government’s security regulation that more than one medium-size (i.e., 200 ton) coast guard vessel must be located in the inland sea.  
The *Jeju* vessel traffic service did not take responsibility for the evacuation decision.  
The KCG denied that they were responsible for allowing the departure of the *Sewol* ferry from Incheon harbor in heavily foggy weather.  
The KCG stated that the *Sewol* ferry did not follow the safe route that the Ministry of Maritime Affairs and Fisheries recommended, which turned out an incorrect statement. |
| “Jurisdictional” conflict with the National Police Agency (1996–Present)         |                                                                                                                                                                                               |                                                                                                                                 |
| Dispute over distribution of the increasing police human resources pool allocated by South Korean central personnel authorities (2013–Present) |                                                                                                                                                                                               |                                                                                                                                 |
| Legal Accountability                                                             | **Legal Accountability**  
The KCG is more concerned with abiding by formal rules and regulations than being innovative in achieving the chief aim of its organizational tasks, particularly with regard to its rescue operations. | The Jeju Coast Guard delayed the dispatch for about 15 minutes because the scene of the accident was not within their jurisdiction.  
The Mokpo Coast Guard was more preoccupied with following protocol than with effectively managing the accident.  
The staff of the *Jeju* vessel traffic service fabricated the communication record to elude indictment to avoid any immediate possible legal accusations. |
|                                                                                   |                                                                                                                                                                                               |                                                                                                                                 |
guard vessel must always be located in the inland sea for emergency situations, which resulted in the lack of resources critical for effective rescue operations at the *Sewol* ferry scene. Furthermore, when its related rescue operations turned out a failure, the KCG tried to escape censure by denying their responsibility while allegedly blaming other involved parties.

Thirdly, the KCG has been conceived of as being more concerned with abiding by formal rules and regulations than being innovative in achieving the major aim of its organizational tasks (as many other Korean governmental organizations have been similarly criticized) particularly with regard to its rescue operations. While responding to the *Sewol* ferry accident, consequently, the *Jeju* Coast Guard delayed the dispatch for about 15 minutes because it assumed that the scene of the accident was out of their jurisdictional boundary. Similarly, the *Mokpo* Coast Guard was more concerned about following protocol than effectively managing the accident in all its urgency. In order to avoid any immediate possible legal accusations after the accident, the staff of the *Jindo* vessel traffic service went so far as attempting to fabricate the communication record.

Finally, the KCG, lacking aptitude and expertise in its rescue operations tends to shirk professional accountability by shifting related responsibilities to non-governmental entities. Relatedly, for the *Sewol* ferry accident, the KCG heavily relied on Undine Marine Industries Co., a private entity, from the second day of the rescue operations.

**Reaction of the Korean Central Government**

As citizens began to search for answers and guilty parties, the Korean central government had to quickly respond. On May 18, 2014, only 1 month after the accident, President Park Geun-hye announced a plan to break up the KCG. According to the *Park* administration’s plan, the search and rescue mission and maritime security roles of the KCG were transferred to a newly established department for national safety that would function as a “control tower” during national disasters. On November 19, 2014, the Ministry of Public Safety and Security was established and now has the combined roles of the KCG and the National Emergency Management Agency (Ministry of Public Safety and Security,
2015). This was a measure to accept and respond to severe criticism that there was no centralized national disaster or safety management system in South Korea.

The Korean central government might have wished to assert that such government reorganization would usher in a better disaster and safety management system, but some argue that this action is symbolic and will, once again, merely reinforce the old standards of hierarchical and political accountability within the newly established government agency. In fact, most of the personnel from the former KCG, except for 200 personnel with duties related to intelligence and investigation, moved directly to the new Ministry of Public Safety and Security. The ex-vice president of the Joint Chiefs of Staff of the Korean army was appointed as the first head of the Ministry of Public Safety and Security (Ministry of Public Safety and Security, 2015). Likewise, there seems to be little “desirable” change in terms of professional accountability within this newly established government entity.18

Conclusion and Discussion

When examining the issues related to risk, disaster, and crisis management, previous literature generally holds two broad theoretical perspectives (Hwang & Park, 2016; ‘t Hart & Sundelius, 2013). The first perspective focuses upon macro-level institutional settings and political dynamics that surround disaster management organizations in the context of risk governance (Nohrstedt & Weible, 2010), which also offers knowledge about the organizational task environments within which the related organizations function and perform. Topics of previous studies rooted on this perspective include politics of risk and disaster (Boin et al., 2010; Jones & Song, 2014; Moyer & Song, 2016; Song, 2014; Song, Silva, & Jenkins-Smith, 2014; Tumlison, Moyer, & Song, 2016), bureaucratic politics of crisis management (Preston & ‘t Hart, 1999), politics-administration relations embedded into crisis episodes (Boin, McConnell, & ‘t Hart, 2008), and the role of representative institutions in crisis management (Stark, 2010), to list a few. Meanwhile, the second theoretical perspective emphasizes technical and managerial issues that many disaster management organizations are dealing with in their day-to-day practices (Hwang & Park, 2016; Sadiq, 2017; Stark, 2011; ‘t Hart & Sundelius, 2013). The focus of the earlier research based on this tradition, for instance, includes more practical aspects of disaster management (Cigler, 2009), incident command system of crisis contingencies (Moynihan, 2009), and multi-actor cooperation in planning and responses (Egan & Tischler, 2010; Rosenthal & Kouzmin, 1991).

This study uses both perspectives to understand how a government organization’s institutional context and political dynamics shape its organizational task environments and how such environments translate into its functional behaviors in the context of risk, disaster, and crisis management. In doing so, we attempt to examine the KCGs attitudes, aptitudes, and behaviors exhibited in its failed rescue operations during the 2014 Sewol ferry accident in South Korea, grounded
on the bureaucratic accountability framework posited by Romzek and Dubnick (1987).

Our analysis reveals that the KCG’s institutional context and the strategic motivation of its leadership shaped its enduring accountability structure, which, in turn, influenced its poor performance in its disaster management practices dealing with the Sewol ferry case. More specifically, the KCG, rooted in the command and control system of the Korean navy, has been chiefly influenced by hierarchical accountability. In addition, the KCG has consistently focused on political accountability in the process of organizational development. The KCG’s reaction to the Sewol ferry disaster reflected those two types of accountability; there was much concern regarding hierarchical and political accountability, along with legal accountability, in the midst of the accident. Meanwhile, there was no place for considerations regarding professional accountability within the KCG, when it was most needed.

After the disaster, the Park Geun-hye administration dismantled the KCG and created the Ministry of Public Safety and Security to deal with national disasters. However, it is unlikely that a new organization consisting of the same personnel, with similar top managers and bureaucratic structure, would transform its type of bureaucratic accountability. In spite of such disaster-induced government reform, we expect that the Ministry of Public Safety and Security would not guarantee a much improved response to national disasters.

The Sewol ferry accident explicates that professional accountability is especially needed in disaster management organizations. One of the key countermeasures to mitigate disasters is to put the right experts in the right place, who have enough training to properly use their technical knowledge and professional experiences. Well-trained experts with professional know-how (and the leeway and capability to improvise split-second independent decisions) are essential for predicting, assessing, and managing various disasters (Kapucu, Augustin, & Garayev, 2009; Koliba, Mills, & Zia, 2011; Richardson, Macauley, Cohen, Anderson, & Stern, 2011). Romzek and Dubnick (1987), for example, claimed that decision-making relying upon professional accountability plays an important role in avoiding management failure in their analysis of the 1986 U.S. space shuttle Challenger disaster. Romzek and Dubnick (1987) also show that the political and bureaucratic accountability which had been developed at NASA in response to institutional expectations were not the appropriate mechanisms to respond to the 1986 U.S. space shuttle Challenger disaster. They insist that this management failure could have been avoided if NASA had made the decision to rely upon professional accountability. Likewise, Romzek and Ingraham (2000) claim that the culture emphasizing bureaucratic accountability rather than professional accountability within the military was one of the main culprits for the Ron Brown plane crash.

In South Korea, anecdotal examples indicate that holding professional accountability is an important contributing factor for a government organization’s successful disaster management. In October 2010, for instance, after a routine food safety screening, the city of Seoul announced that octopus heads contain
hazardous amounts of cadmium, a carcinogen that can generate severe negative health effects on the human body, especially on the liver and kidneys. Octopus has long been popular in South Korea (in part for its purported aphrodisiac properties) and such an announcement from the Seoul city government triggered a high-alert reaction—along with considerable confusion—among citizens. In responding to this situation, the Ministry of Food and Drug Safety, a South Korean central government agency, promptly tested the safety of octopus consumption—and other seafood—and announced that all parts of octopus are safe to eat, based upon its test results (Ministry of Food and Drug Safety, 2011). Due to the prompt intervention of the Ministry of Food and Drug Safety—which has long been well known for its scientific expertise on food and drug safety issues along with rigorous lab test methodology—the confusion regarding the safety of octopus consumption among citizens soon boiled down, and no further serious health concerns—due to the related risk perceptions—prevailed.

Another similar example can be found in the case of the Korea Forest Service, an independent government agency built up upon its task-relevant expertise and specialty while emphasizing professional accountability. Deforestation has been a serious global concern for several decades. In 2007, the Food and Agriculture Organization (FAO) of the United Nations evaluated South Korea as the only country that has fully achieved successful reforestation after World War II (FAO, 2007). The Korea Forest Service played a critical role in the reforestation process. The chief executive, as well as middle managers of the Korea Forest Service, were appointed based upon their professional merits for forestry management. At the same time, the Forest Training Institute of the Korea Forest Service continually retrained public officers, who sought to acquire and update their knowledge and skills about forestry management (Korean Association for Public Administration, 2009). As a result, the Korea Forest Service, while putting an emphasis on professional accountability in its organizational structure and function, was successful in establishing and implementing a sustainable reforestation plan in South Korea over the past several decades.

Of course, an expert based disaster management system of this sort would not solve every possible problem. However, professional accountability, which emphasizes scientific rationality and technical professionalism, can greatly improve the responsiveness of bureaucrats during the crucial moments of an emergency (Sparrow, 2000), especially in the context of government disaster management practices in South Korea. Though professional accountability should not be bureaucrats’ sole focus, an institution should be designed to consistently emphasize and foster an invested sense of professional accountability, as it is balanced with hierarchical, political, and legal accountability, in all of its members.

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Notes

1. In this section, we do not place considerable focus on discussing the KCG’s legal accountability from an organizational history perspective mainly because the KCG, like any other government organization in a modern administrative state, has been established on a legal basis (i.e., Government Organization Act [2008]) and has sustained—at least “formally”—its organizational functionality according to the legal framework set up for the broader conception of accountable government. We will discuss the KCG’s legal accountability in the context of its behavior shown in its unsuccessful rescue operations during and after the Sewol ferry accident in the subsequent section.
2. Hierarchical accountability that emphasizes the chain of command is typical in the military (Romzek & Ingraham, 2000).
3. The number of Chinese fishing ships captured inside of the EEZ in 2011 was 534, which increased 44 percent from 370 in 2010 (KCG, 2013c).
4. This serious conflict between the KCG and Chinese fishing boats has proven fatal; thus far, two policemen and one captain of a Chinese fishing boat have perished.
5. The survey was distributed, one at each substation or local office, from August 1–31, 2013. In total, 280 surveys were collected (KCG, 2013b).
6. The KCG substations have equipment including patrol ships, patrol cars, personal watercraft, and two-wheeled vehicles (KCG, 2013c).
7. The number of personnel in the KCG is about 7.1 percent of the National Police Agency. Therefore, the expected increase in manpower was about 2,000. From the increase of 10,000 personnel, one can infer that the KCG put considerable effort into gaining support from politicians.
8. BSC is an integrated management control system starting in the early 1990s. It measures organizations’ critical success factors such as financial performance, customer service, internal business processes, and the organization’s capacity for learning and growth (Daft, 2010).
9. The budget of the Maritime Pollution Response Bureau was 9.4 million dollars of the total budget of the KCG (1,038.5 million dollars) in 2012. More than 50 percent of the budget (543.8 million dollars) was earmarked for new equipment reinforcement, such as heavy vessels or aircrafts (KCG, 2013a).
10. The survey of the staff members of the Maritime Pollution Response Bureau was conducted from November 14–18, 2012. The remaining 30 personnel wanted to move to the other agencies. Two personnel wanted to retire (KCG, 2013a).
11. It is noteworthy that the KCG had discussed the change of position of this kind with the Ministry of Security and Public Administration quite seriously (KCG, 2013a). On April 15, 2014, the Commissioner General of the KCG formally requested the change of the position to the Korean National Assembly.
12. Jindo vessel traffic service and the KCG (and its regional rescue center), as organizations under the Ministry of Oceans and Fisheries, are parts of collaborative rescue operations during related maritime emergencies.
13. This is a crucial episode; if the Sewol ferry had cancelled her departure from Incheon harbor like all other commercial vessels at that time, there would have been no possibility of the occurrence of this tragic accident later in her voyage.
14. The Jeju Coast Guard was a regional branch of the KCG and its jurisdiction was nearby the Sewol ferry accident scene.
15. The Jeollanam-do fire station (under the Ministry of Security and Public Administration) and the Mokpo Coast Guard (a regional branch of the KCG [under the Ministry of Oceans and Fisheries] would constitute major parts of the Regional Rescue Center in an accident occurring in the ocean nearby their regions.
16. One of the challenges in emergency management involves coordination problems across organizational boundaries (Han, Hu, & Nigg, 2011; Kuipers, Boin, Bossong, & Hegemann, 2015; Robinson, Murphy, & Bies, 2014).
17. Even in the United States, the general public expects quick presidential responses to major disasters (Kapucu, Van Wart, Sylves, & Yuldashev, 2011).
18. Yet again, the Korean government was criticized for inappropriate action against Middle East Respiratory Syndrome (MERS). After a 68-year-old man returning from the Middle East was diagnosed with MERS on 20 May 2015, a total of 186 cases emerged, with a death toll of 36. The Korean government mishandled its duty to contain the virus by underestimating the danger of MERS coronavirus and hesitating to make a public announcement.
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