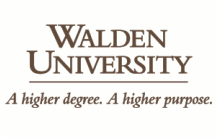

2016

Strategies to Improve Marine Inspection Performance in the U.S. Coast Guard

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This is to certify that the doctoral study by

Joshua Buck

has been found to be complete and satisfactory in all respects,
and that any and all revisions required by
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2016

Abstract

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by

Joshua Wayne Buck

MS, Trident University International, 2008

BS, U.S. Merchant Marine Academy, 2005

Study Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Business Administration

Walden University

April 2016

Abstract

U.S. Coast Guard leaders have received feedback concerning gaps in performance management of the Marine Inspection Program (MIP) from maritime industry stakeholders, Department of Homeland Security representatives, and internal agents over the past decade. The purpose of this case study was to explore strategies to improve performance in the U.S. Coast Guard MIP. Data were gathered through a review of documentation pertinent to marine inspection (i.e., policy, requirements, analyses, reports, and job aids) and 13 semistructured interviews with personnel from 3 distinct organizational levels. Study participants represented civilian and active duty personnel from all geographical U.S. Coast Guard districts, as well as tactical, strategic, and policy levels of the MIP. The conceptual framework of the study was Fusch and Gillespie's human competence model. Data analysis was based on coding of words, phrases, and sentences from multiple sources of data to identify recurring themes through methodological triangulation. The thematic analysis of the study data revealed themes that included lack of mission clarity, limited information management resources, differences in skills and knowledge management among inspectors, and unclear requirements for selecting a marine inspector. The study framework provided a basis for additional performance management research in government entities. The recommendations from this study may lead to social change through improved U.S. Coast Guard marine inspection services, which could result in greater safety, reduced pollution, and fewer security risks in the navigable waterways of the United States.

Strategies to Improve Marine Inspection Performance in the U.S. Coast Guard

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Dedication

I dedicate this doctoral study to my wife Christina, and to my children, Taylor, Dominick, Christopher, Alexis, and James, who inspired, supported, and motivated me throughout this work.

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I would like to thank the members of my committee for helping me through this process. Dr. Richard Snyder, chair, was patient and provided guidance throughout my doctoral journey. I do not know if I could have kept moving forward without his encouragement. I am very grateful to Dr. Douglas Campbell for his wisdom and support and to Dr. Romuel Nafarrete and Dr. Yvette Ghormley for their precise reviews and editing.

I would be remiss if I did not acknowledge the most important contributors to my success in this study. I owe more than a thank you to my family. To my children, thank you for your unconditional love and patience while I became a doctor, just not a medical one. To my wife, Christina, this accomplishment is more about you than me. I could not have completed this voyage without you. I love you.

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Section 1: Foundation of the Study

Performance management is an ongoing topic for government organizations (Hvidman & Andersen, 2015; Schillemans, Van Twist, & Vanhommerig, 2013). Federal government leaders began performance management initiatives in U.S. federal agencies a century ago when they established the U.S. Bureau of Efficiency to address waste in government spending and operations (Talbot, 2010). Since then, government leaders throughout the United States and in other countries have developed performance management initiatives (Hvidman & Anderson, 2015). Recent examples outside the United States are the British government's Comprehensive Performance Assessment and the European Union's Common Assessment Framework (Talbot, 2010).

Even when government leaders employ performance management initiatives, they often create ambiguous goals and objectives related to them (Jung, 2014a; Walker, Boyne, and Brewer, 2010). Furthermore, leaders often neglect performance management objectives, a lapse that hinders them from establishing appropriate organizational management (Kenny, 2012). Logically, when suitable performance management exists, organizational performance improves (Hall, 2012; Seidman, 2012). Consequently, performance management interventions can produce high returns for organizations (Hall, 2012; Seidman, 2012).

The management of performance connects directly to fiscal management (Hall, 2012; Seidman, 2012). Performance management supports the use of clear fiscal goals (Hall, 2012; Seidman, 2012). Performance management and measurement help an organization's members understand monetary allocation, especially the efficient and

prudent use of taxpayer and shareholder monies (Hall, 2012; Talbot, 2010; Walker et al., 2010). Furthermore, the tight budget climate of public and private organizations may escalate the level of assessment needed of existing performance management strategies (Hall, 2012; Talbot, 2010; Walker et al., 2010). Seidman (2012) argued that organizational leaders should find ways to improve processes, efficiency, and overall performance. A first step in discovering strategies for improving performance and, in parallel, fiscal efficiency, is determining how to explore the issues (Gilbert, 2013).

Seidman (2012) reported that, based on the performance improvement model, the beginning phase of exploring performance is to identify organizational missions, accomplishments, goals, and vision. Farrington (2012) noted that the first stage is setting a benchmark for performance. Goal ambiguity, a distinctive characteristic of public sector organizations (Jung, 2014a, 2014c), makes progress more difficult for such organizations than for those in the private domain (Walker et al., 2010). Public sector leaders often underuse the beginning phase of performance analysis (Jung, 2014a, 2014b; Walker et al., 2010); thus they need to clarify their established accomplishments and goals (Walker et al., 2010).

The U.S. Department of Homeland Security (which includes the U.S. Coast Guard) encompasses a wide range of activities that make performance management arduous (Talbot, 2010). Recognizing the department's struggle in performance management, the Homeland Security Institute (2009) and Ames (2015) described the need for enhanced performance objectives for the U.S. Coast Guard. The HSI and Ames studies encompassed the U.S. Coast Guard's entire Prevention directorate, which

includes the MIP. Further substantiating the point, a 2007 report to the commandant of the U.S. Coast Guard conveyed a perception held by maritime industry stakeholders that U.S. Coast Guard leaders no longer considered the overall mission of marine safety, including that of the Marine Inspection Program (MIP), essential (Card, 2007). The same 2007 report included a statement that U.S. Coast Guard leaders have allowed marine inspector performance to decline (Card, 2007), a problem reported again five years later (U.S. Coast Guard [USCG], 2012).

The U.S. Coast Guard leaders' need for strategies to improve marine inspection performance (USCG, 2012) provides the basis for this study. U.S. Coast Guard marine inspectors verify regulatory compliance of commercial vessels and promote the safety of people, property, and the environment for U.S. maritime stakeholders (Department of Homeland Security [DHS], 2011). New strategies to improve marine inspectors' performance should enhance commercial vessels' compliance with federal and international regulations.

Researchers have found that the competence of U.S. Coast Guard marine inspectors has deteriorated (DHS, 2013; Homeland Security Institute [HSI], 2009). However, ensuring appropriate competence stems directly from adequate management of performance and expectations (Gilbert, 2013). Therefore, strategies developed to enhance the management of the MIP may provide a way forward for U.S. Coast Guard leaders.

Background of the Problem

U.S. Coast Guard marine inspection performance has declined, according to merchant mariners and others in the maritime industry (DHS, 2011, 2013; HSI, 2009).

Relevant maritime industry partners have declared that the U.S. Coast Guard lacks the requisite marine inspection capabilities, and progress in the maritime industry has left U.S. Coast Guard regulators lagging behind with respect to technical advancements in maritime industry operations (DHS, 2011). Members of Congress have scrutinized the U.S. Coast Guard in regard to managing performance and providing necessary performance data (Ames, 2015; DHS, 2013). In a 2013 DHS study of eight U.S. Coast Guard units, researchers found only 32% of marine inspectors met marine inspector qualification requirements (DHS, 2013). In addition, maritime industry leaders have perceived that some personnel of the Prevention Directorate (also known as the Marine Safety Program), including marine inspectors, are less experienced and knowledgeable than they were in the past (Card, 2007; USCG, 2012).

Unclear Expectations and Objectives

U.S. Coast Guard policy lacks clear expectations, statements of work accomplishments, and objectives for marine inspectors (DHS, 2011; HSI, 2009); the accomplishments expected vary across geographic regions as well (HSI, 2009). Thus, upper level management does not have clear insight concerning the competence and performance of marine inspectors (DHS, 2011; USCG, 2012). Further, in an organizational survey of 757 active marine inspectors, the U.S. Coast Guard (2012) reported that 62.5% spend three days or fewer per week completing their primary duties. Requirements and primary accomplishments that are unclear may have affected marine inspector performance outputs (HSI, 2009).

Marine Inspector Competence

U.S. Coast Guard leaders want proficient marine inspectors in each qualification (qualification being synonymous with certification and competency in the U.S. Coast Guard MIP). However, U.S. Coast Guard leaders have set a goal for marine inspectors to attain as many qualifications as possible and have stated that career advancement depends on qualification achievement (U.S. Coast Guard, 2010, p. 6). Hence, U.S. Coast Guard policy and guidance has promoted attainment of numerous qualifications for marine inspectors yet does not require demonstrated expertise in any individual qualification (HSI, 2009). As a result, a marine inspector may have a long list of qualifications yet possess limited competence in them. The U.S. Coast Guard requires no tests, measures, metrics, or data to evaluate U.S. vessel marine inspector competence; as of 2012, U.S. Coast Guard leaders did not know the level of competence or performance of their marine inspectors (USCG, 2012). Therefore, the focus of this study was to explore strategies to improve MIP management, to help U.S. Coast Guard leadership improve marine inspection performance and proficiency.

Problem Statement

The Government Performance and Results Modernization Act (GPRA) required federal agencies to define their missions and declare the goals supported by their activities (Steinberg, 2012). Nonetheless, nearly two-thirds of 100 federal agency chief financial officers or their deputies have stated that the GPRA has done little to improve the use of performance management in the U.S. government (Lippuner, 2014). The U.S. Coast Guard is among the agencies obligated to meet the GPRA requirements (Ames,

2015). The work of the U.S. Coast Guard MIP is economically significant because commercial vessels worldwide carry 90% of all transported goods (Cordeau, Legato, Mazza, & Trunfio, 2015). However, 41% of the qualified U.S. Coast Guard marine inspectors who regulate these commercial ships have stated that they were not confident engaging with maritime industry personnel regarding commercial vessel regulatory compliance (USCG, 2012). The general business problem is that U.S. Coast Guard leadership needs to improve marine inspection performance. The specific business problem is that U.S. Coast Guard leaders often have limited strategies to improve MIP performance.

Purpose Statement

The purpose of this qualitative case study was to explore strategies that U.S. Coast Guard leaders may need to improve the performance of the MIP. Participants in the study included 13 U.S. Coast Guard MIP personnel, including policymakers, inspectors, strategic managers, and one human resource administrator. The participants' representation of three distinct levels of the organization promoted triangulation for the study's interview data. U.S. Coast Guard personnel external to the MIP did not contribute data to the study. Interviews took place in Washington, DC, in person and via telephone. The findings of the study may affect positive social change by promoting greater safety and reducing risk among vessels in U.S. navigable waterways. The safety and security risks addressed by marine inspectors affect millions of U.S. citizens. Further, I documented a process by which researchers may identify performance improvement strategies in other organizations.

Nature of the Study

The method for this study was qualitative. Unlike quantitative and mixed methods, qualitative methods allow a nonlinear exploration of a study's central question (Yin, 2014). Researchers may use qualitative methods to explore problems within given cases (Bansal & Corley, 2012). For example, interviews with open-ended questions allow a researcher to obtain accurate and intensive qualitative data (Myers, 2013; Yin, 2014). In contrast to quantitative methods, qualitative methods foster flexibility in the expected evolution of a study (Bansal & Corley, 2012; Yin, 2014) and allow for further exploration (Yin, 2014). Qualitative methods also allow alternative interpretations to surface freely (Deodhar, Saxena, Gupta, & Ruohonen, 2012; Myers, 2013). Quantitative methods do not allow researchers to take into account the contexts of participants' feelings, experiences, observations, and relevant documentation (Myers, 2013). Mixed methods contain potential problems of inconsistent application, model independence, and incorporation of methodologies without a clear basis (Larkin, Begley, & Devane, 2014). Also, mixed methods can be problematically time-consuming (Terrell, 2012). In summary, a qualitative method allows exploration, flexibility, expected evolution, and an ability to obtain intensive and accurate data, all of which make the method appropriate for this study.

The design for this study was a single-case study. Researchers gain the advantage of flexibility and adaptability from case study research, more so than other designs (Yin, 2014). Case study design principles allow researchers to dig deeper into the unit of analysis (Siti-Nabiha, Thum, & Sardana, 2012; Yin, 2014). The case study design of this

study allowed for flexibility, adaptability, and an in-depth exploration of the case. Other designs, including ethnography, narrative, phenomenology, and grounded theory were not appropriate for this study. First, ethnography designs focus on participants' culture (Petty, Thomson, & Stew, 2012), this study did not include exploration of participants' culture. Second, with narrative design a researcher uses stories from one or a few participants (Petty et al., 2012), because of the need for a more comprehensive view of the U.S. Coast Guard MIP, that design was not appropriate. Third, phenomenology is the investigation of participants' lived experiences surrounding a common phenomenon (Petty et al., 2012). That design would not allow a comprehensive study of performance improvement strategies with the wide range of evidence sources and stakeholder views common to case studies. Finally, grounded theory relates to developing new theory rather than simply presenting findings within a case (Baker, 2013; Myers, 2013), a goal unrelated to the purpose of this study.

A case study allows the researcher to analyze a real-life situation and its relevant contexts through multiple sources of evidence (Myers, 2013). Furthermore, a unique unit of analysis is consistent with a single-case study design (Yin, 2014). The U.S. Coast Guard is a unique case because the organization is not replicated elsewhere in the world. Yin (2014) stated that with a unique case, the researcher should derive comprehensive findings through one thorough study. Therefore, a qualitative method and single-case study design were suitable to promote an in-depth exploration of the U.S. Coast Guard MIP.

Research Question

A central question is the foundation for a qualitative research method, and a case study should evolve as a researcher seeks to answer that question (Yin, 2014). The central question for this study was *What strategies do U.S. Coast Guard leaders need to improve the performance of the marine inspection program*?

Interview Questions

The literature review aided in the development of the interview questions below, which are reproduced in Appendix A:

1. How is performance managed in the U.S. Coast Guard MIP, aside from individual officer evaluation reports?
2. What is the U.S. Coast Guard MIP mission?
3. What are the motives for being a marine inspector?
4. What is an exemplary marine inspection?
5. How do marine inspectors receive performance feedback?
6. What information does a marine inspector need to complete the job?
7. What tools support the performance of marine inspection?
8. How is the current training conducted for marine inspectors?
9. How are marine inspectors selected for their positions?
10. How are marine inspectors' knowledge and skill maintained?
11. How is a marine inspector incentivized?
12. What do you feel are the barriers, if any, to exemplary marine inspection performance?

Conceptual Framework

The conceptual framework for this study was Fusch and Gillespie's (2012) human competence model. The framework is an extension of Gilbert's (2013) behavioral engineering model first developed in 1974. The conceptual framework supported an exploration of the mission, goals, system processes, and clarity in accomplishments that existed in the U.S. Coast Guard MIP. The following content includes an overview of the model and related theories that support the model as the conceptual framework for this study.

Exploring Organizational Performance

To use Fusch and Gillespie's (2012) human competence model appropriately (see Figure 1), one must first explore the desired end result for an organization. Exploring organizational performance begins by defining an organization's vision, mission, strategies, and overall accomplishments, or end results (Fusch & Gillespie, 2012). Fusch and Gillespie (2012) stated that, rather than aligning and validating visions, missions, and objectives, U.S. organizations have recently based performance management on monitoring *activities*, not work *accomplishments*. Yet Gilbert (2013) emphasized that it is critical to measure work accomplishments rather than activities. Gilbert (2013) found that the work accomplishment is what matters to begin performance improvement, not how many activities occurred to achieve that accomplishment. Lack of mission clarity and defined objectives may be affecting the U.S. Coast Guard MIP management and measurement. Thus, the exploration of mission clarity is the first essential component in this study's conceptual framework.

The investigation of an organization's performance supports is the second component in the framework (Gilbert, 2013). Fusch and Gillespie (2012) provided an overview for how to explore performance supports at an organizational level. Figure 1 shows their human competence model. They explained that there are two central dimensions inherent in improving performance (or human competence) in the workplace once the desired end result is defined: *environmental supports* and *worker behavior.*

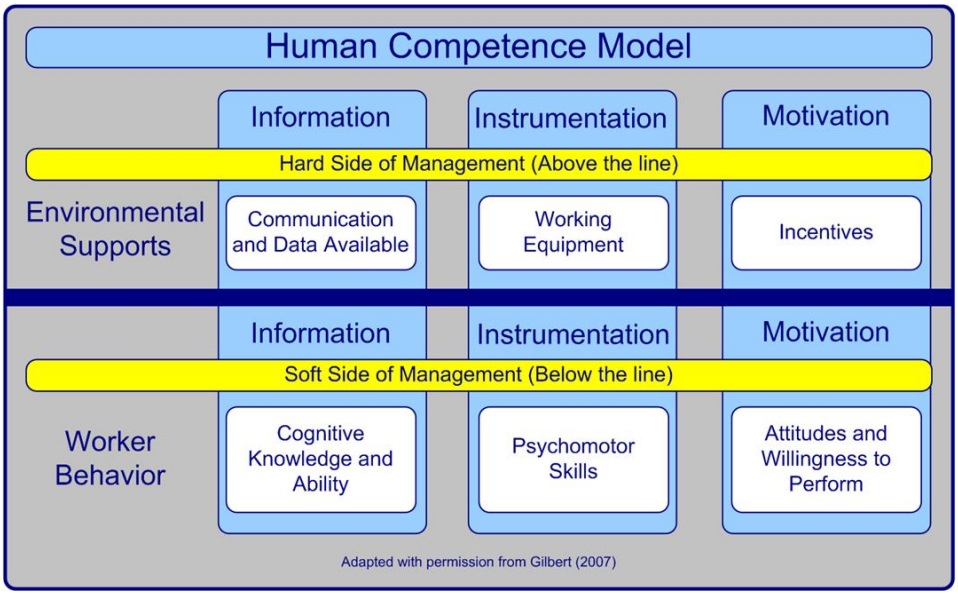

Figure 1. Fusch and Gillespie's (2012) human competence model. Adapted from Gilbert, 2007, in *A Practical Approach to Performance Interventions and Analysis* (p. 2), by G. E. Fusch and R. C. Gillespie, 2012, Upper Saddle River, NJ: FT Press. Copyright 2012 by Gene E. Fusch and Richard C. Gillespie. Reprinted with permission.

Environmental supports include factors extrinsic to a performer, while worker behavior incorporates intrinsic factors. Fusch and Gillespie segmented the model into three types of factors: *information, instrumentation,* and *motivation*. These factors affect environmental supports and worker behavior; examples of each are shown in Figure 1 (Fusch & Gillespie, 2012).

In summary, the framework of this study was the work of Fusch and Gillespie (2012) and consistent with that done by Gilbert (2013). To address mission clarity, worker behavior, and environmental supports in the U.S. Coast Guard MIP, I took the following steps: (a) explored the organizational vision, mission, strategy, and desired end results; (b) investigated environmental supports for the MIP; (c) studied worker behavior within the MIP; (d) determined ideal performance for marine inspectors, and (e) recommended strategies to promote that performance. The next paragraphs address relevant motivational theories inherent within the conceptual framework of the study.

Related Motivational Theories

Two motivational theories align well with the conceptual framework of this study: expectancy theory (Vroom, 1964) and motivation-hygiene theory (Herzberg, Mausner, & Snyderman, 1959). This section of the conceptual framework includes content regarding how the theories provide direct support for the factors within the human competence model.

Expectancy theory. Vroom's (1964) expectancy theory includes key components related to performance improvement. Vroom addressed (a) *expectancy,* performers' belief that they can meet expectations; (b) *instrumentality,* performers' belief that they will receive a reward when meeting performance expectations; and (c) *valence,* the degree to which performers value a potential reward for meeting performance expectations (Vroom, 1964). Expectancy, instrumentality, and valence relate to Fusch and Gillespie's (2012) environmental supports and worker behaviors. Fusch and Gillespie's environmental supports of information and instrumentation align with the expectancy

theory components of expectancy and instrumentality. Organizational leaders concentrate on expectancy and instrumentality when they (a) set realistic and clear performance expectations, (b) provide corresponding tools to meet those expectations, and (c) reward employees consistently for meeting expectations. Organizational leaders meet the valence component when they distribute rewards that employees value. Furthermore, leaders who provide appropriate training, courses, and professional development reinforce performer expectancy and appropriate worker behavior (Purvis, Zagenczyk, & McCray, 2015; Renko et al., 2012). If organizational leaders embrace the six components of the human competency model shown in Figure 1, they apply the expectancy theory of motivation implicitly. The expectancy theory of motivation supports the conceptual framework for this study.

Motivation-hygiene theory. Herzberg's motivation-hygiene theory is relevant to an exploration of performance improvement strategies (Bratton, 2013). This theory, originally developed in 1959, includes two types of employee factors: hygiene factors, *dissatisfiers,* and motivation factors, *satisfiers* (Bratton, 2013; Chyung & Vachon, 2013; Herzberg et al., 1959; Lacey, Kennett-Hensel, & Manolis, 2015). In Herzberg's theory, hygiene factors (e.g., compensation) may be dissatisfying for an employee or may reduce performance if absent (Chyung & Vachon, 2013; Khan, Shahid, Nawab, & Wali, 2013). Conversely, motivational factors (e.g., recognition, challenging jobs, and greater responsibility) facilitate employee performance improvement and job motivation (Davoudi & Mousavi, 2012; Khan et al., 2013). Intrinsic and extrinsic workplace factors are often uniformly meaningful in ensuring that employees perform well (Khan et al.,

2013). Correspondingly, Herzberg's motivational-theory factors appear related to Fusch and Gillespie's (2012) performance improvement components of environmental supports and worker behavior (Bratton, 2013; Chyung & Vachon, 2013).

Bratton (2013) and Chyung and Vachon (2013) stated that, according to Herzberg's motivation-hygiene theory, organizational leaders should anticipate subpar employee performance when they do not provide adequate environmental supports (including hygiene and motivation factors) such as clear expectations, job security, job information, rewards, and appropriate tools. Moreover, leaders should expect inferior performance when they do not support worker behavior (including hygiene and motivation factors) with adequate training, job placement, and appropriate motivation (Bratton, 2013; Chyung & Vachon, 2013). This study's conceptual framework aligns with Herzberg's motivation-hygiene theory, which informed the content of the interview questions, document review, and analysis of collected data.

Definition of Terms

Marine inspector. A marine inspector is any member of the U.S. Coast Guard who regulates vessels according to Subtitle II, Title 46, U.S. Code; Title 46 and Title 33, U.S. Code; and the regulations or requirements issued under the statutes (46 CFR 30.10-43, 2015).

Officer tour. An officer tour is an assignment to report to a U.S. Coast Guard unit, as ordered by the U.S. Coast Guard Office of Personnel Management (USCG, 2010). Tour lengths range from 2–4 years, and the majority are 3 or 4 years (USCG, 2010).

Prevention Directorate. The Prevention Directorate is under the authority of the U.S. Coast Guard Assistant Commandant for Prevention Policy; its personnel are responsible for promoting the safety, security, and environmental protection of the navigable waterways of the United States (USCG, 2010).

Prevention Officer Career Guide. The Prevention Officer Career Guide is a document that U.S. Coast Guard officers use to understand career progression, milestones, and expectations (USCG, 2010).

Valuable accomplishment. A valuable accomplishment is a product or consequence of behavior that enhances the organization or person in control of the behavior (Gilbert, 2013).

Vessel inspection. A vessel inspection is an inspection conducted on U.S. commercial vessels to verify compliance with regulations (USCG, 2010).

Assumptions, Limitations, and Delimitations

Assumptions

Assumptions are pre-existing beliefs about a study (Kirkwood & Price, 2013; Simon & Goes, 2013). Assumptions are beliefs that a researcher assumes are true and critical to a study (Simon & Goes, 2013). Three main assumptions were central to this study. The first was that the 13 participants provided truthful and honest interview data. The second assumption was that participants' attainment of four U.S. Coast Guard marine inspection qualifications meant that they had thorough understanding of the MIP. The final assumption was that the semistructured interviews appropriately captured important aspects of the participants' views, perceptions, and thoughts regarding the MIP.

Limitations

Limitations are factors that may affect the results of a study but are beyond the researcher's control (Kirkwood & Price, 2013; Simon & Goes, 2013). Limitations also characterize potential weaknesses that may affect a study (Simon & Goes, 2013). First, this was a study of a single case, and thus the findings are not generalizable across federal agencies or similar organizations. Second, I conducted interviews with 13 members of the U.S. Coast Guard MIP. The participants' perceptions and views may not represent the perceptions of all members of the U.S. Coast Guard MIP. Additionally, although I conducted interviews at three distinct organizational levels in the U.S. Coast Guard MIP, the responses may not have addressed all factors that affect marine inspection performance.

Delimitations

Delimitations represent the scope of a case and relevant research (Yin, 2014). The U.S. Coast Guard MIP and inspection of U.S. vessels were the focus of the study. The case within the study encompassed one program within the U.S. Coast Guard Prevention Directorate, which is under the direction of the Office of Commercial Vessel Compliance. Interview participants included U.S. Coast Guard MIP leaders, inspectors, strategic managers, and a human resource administrator, but the sample did not incorporate foreign vessel examination policy, examiners, documentation, and managers. Thus, the context was only U.S. vessel marine inspection. I promoted methodological triangulation and a holistic stakeholder view of the case by interviewing stakeholders at multiple organizational levels and geographic locations and by conducting a document

review. Accordingly, the study framework fostered a comprehensive view of the U.S. Coast Guard MIP.

Significance of the Study

Contribution to Business Practice

From this study, U.S. Coast Guard leaders now have more information with which to develop strategies and techniques for implementing performance improvement interventions. Federal agency researchers and other personnel may find the results of this study useful with respect to a general exploration of performance management because the findings constitute a method for exploring performance management in a government agency. The findings could also aid U.S. Coast Guard leaders in improving mission clarity, environmental supports for performance, and worker behavior within the U.S. Coast Guard MIP.

Implications for Social Change

The findings from this study may affect the U.S. Coast Guard and the maritime industry. U.S. Coast Guard leaders could improve the MIP performance on the basis of the findings from this exploratory study. Improved performance in the MIP should enhance the safety, security, and environmental protection of U.S. navigable waterways, through enhanced regulatory compliance of U.S. Coast Guard–certified vessels. The potential improvement in regulatory compliance of commercial vessels equates to societal value in safer U.S. passenger, cargo, and tank vessels and could affect a sizable portion of the world's transported goods (Cordeua et al., 2015). The study also provides an example of a framework for exploring performance improvement strategies that other

government and business leaders can use. The framework and findings may allow for future exploration of performance improvement strategies in the U.S. Coast Guard and other federal agencies.

A Review of the Professional and Academic Literature

The literature review addresses six major topics:

1. The global marine inspection problem
2. Performance management (in general)
3. Performance management in government
4. Performance analysis
5. Strategies for performance improvement
6. Related theories

This literature review contains a comparison of previous research studies and findings. The Walden Library software and Google Scholar served as search engines for finding peer-reviewed articles in the ABI/INFORM Complete, Business Source Complete/Premier, SAGE Premier, ProQuest Central, and Science Direct databases. The search terms for discovering relevant content for the review were *performance management, performance improvement, strategic management, performance measurement, motivational theory, organizational behavior, information management, employee incentives, public organization management, strategic planning,* and *organizational management.* Ninety-five percent of the references in the literature review were from peer-reviewed journals. Included in the literature review were citations from 167 articles or publications, with 145 published in 2012 or later; this resulted in 87% of

the literature review references being published within five years of the expected publication of this study. Of the articles and publications within the whole study, 90% were from peer-reviewed journals. Two hundred and twenty-two citations were included in the whole study, with 187 published in 2012 or later; this resulted in 87% of the study references being published within five years of the expected publication of this study.

The review first addresses the significance of the business problem and the concept of performance management in business practice. The next portions contain a summary of recent performance management research on government and federal agencies. Finally, I discuss the research by Gilbert (2013) and Fusch and Gillespie (2012) that provided the conceptual framework for this study. I also explain how to group the factors for analyzing performance management, and conclude with research related to these issues. To categorize the findings of the study, I used groups from the environmental support and worker behavior factors identified in the human competence model and from factors relating to organizational mission clarity.

A Global Problem

The need for strategies to improve marine inspection performance is not confined to the United States (Akyuz & Celik, 2014; Li, Yin, & Fan, 2014). Internationally, marine inspection is synonymous with flag state management. Each seagoing country certifies vessels to operate under their country's flag, or flag state. Flag state management is not to be confused with port state management. Port state examinations are a close cousin to flag state marine inspections but only relate to cursory examinations of foreign vessels by host countries (Sampson, Walters, James, & Wadsworth, 2014). Improving marine vessel

inspection (flag state) performance is a prevalent issue within the global maritime community (Akyuz & Celik, 2014; Li, Yin, & Fan, 2014). Marine vessel inspection is imperative for vessel safety and the prevention of commercial vessel accidents in all nations (Lucas, Kincl, Bovbjerg, Branscum, & Lincoln, 2014), and ineffective and inadequate inspection is a concern worldwide (Akyuz & Celik, 2014). Akyuz and Celik (2014) in a study regarding lifeboat drills cited substandard vessel inspection as the main causal factor in marine accidents and casualties, and they proposed enhanced inspections for the international maritime industry. Furthermore, Roberts, Pettit, and Marlow (2013) found an increase in marine casualties since 2005 among certain types of vessels.

In addition, inadequate communication among country representatives regarding marine vessel inspection has hindered the efficiency and performance of inspections (Heij, Bijwaard, & Knapp, 2011). Because of the ineffectiveness of the global marine inspection system, Knudsen and Hassler (2011) proposed a complete overhaul of global commercial vessel inspection through an international merger of global marine inspectors and relevant resources. Li, Yin, and Fan (2014) suggested that an international ship safety index is necessary to manage the global fleet of commercial vessels effectively. Furthermore, U.S. maritime industry personnel have requested additional regulations and vessel inspection programs to improve safety in the industry (Lucas et al., 2014). The U.S. Coast Guard is a leading organization in the international maritime community (Ung, Tsai, & Chen, 2013). Thus, improvement in U.S. Coast Guard MIP management may lead to performance enhancement in commercial vessel inspection worldwide.

Performance Management

Clear expectations and missions. Singh (2012), in a study of four Indian software service companies, found that clarity of expected work accomplishments is a critical component to effective performance management. Gilbert's (2013) work supported this claim, as he stated public official's or leader's monitoring and management of inputs, behavior, or procedures taken to achieve a work accomplishment matter once a work accomplishment is clear. Based on results from a study of the California Department of Education, Nicholson-Crotty, Grissom, & Nicholson-Crotty (2012) concluded that public officials and leaders should use performance management concepts to direct their primary focus toward organizational accomplishments rather than toward inputs, behavior, or procedures. Performance management involves clarifying organizational missions and establishing goals and actions necessary to achieve those missions (Gilbert, 2013; Singh, 2012, 2013; Walker et al., 2010). Based on a study of 304 middle managers across varying industries in Australia, Nankervis, Stanton, and Foley (2012) noted that managers' use of performance management is essential to organizational success. Once organizational leaders align valued accomplishments or objectives to a job clearly, they may begin to formulate effective performance management (Aziz & Fady, 2013; Bianchi & Riverbank, 2012; Brauns, 2013; Forte, 2014).

Leaders who use performance management can affect the difference between organizational success and failure (Spekle & Verbeeten, 2014). In a study of 101 Dutch public firms, Spekle and Verbeeten (2014) found a positive association between

performance management and firm performance. Moreover, Waal and Counet (2009) stated that the use of performance management advances organizational performance and value. Nevertheless, many organizational leaders do not implement performance management properly (Hay Group, 2011). The Hay Group conducted a study of 1,660 firms' senior decision makers in more than 30 countries across Europe, North and Latin America, the Middle East, and Asia-Pacific; the results showed that 73% of firms failed to align performance management to company strategies (Hay Group, 2011). Nielsen (2014) found that when organizational leaders do not align performance management and management authority, they fail to achieve their objectives. Furthermore, Waal and Counet (2009) stated that organizational leaders fail 70% of the time in implementing performance management.

To achieve ambitious growth, organizational leaders must align their people, processes, strategies, and performance management (Blettner, Chaddad, & Bettis, 2012; Waal & Counet, 2009). Performance management is an efficient way for companies and organizations to achieve the level of success demanded by executives and stakeholders (Hay Group, 2011). Further, Melnyk, Bititci, Tobias and Andersen (2014), in a study of 30 performance management experts in civilian and academic roles using a Delphi method, found that organizational leaders can use performance management effectively when they define strategic objectives.

Consequences of inadequate performance management. Unclear expectations and objectives typically lead to negative outcomes (Callender, 2011). Callender, in a case study regarding criminal justice services in Australian, found that an incomplete mission

statement for interagency prisoner transports could have been a causal factor in a prisoner's death. In a study of 94 maritime casualties in the United Kingdom, Batalden and Sydnes (2014) found that inadequate and unclear performance expectations for officers of commercial vessels led to fatal vessel casualties. Mansor, Chakraborty, Yin, and Mahitapoglu (2011) discussed performance management as an Achilles heel to organizational human capital. In a case study of 50 top-performing Ghana Club firms, Darbi (2012) found that high-performing firms had clear mission statements. In their case studies, Callender and Darbi identified a necessity for clear and accepted performance management.

Performance management and information management. Information management, including that of digital information, is a vital component of performance management (Amasaka, 2013; Hsu, 2014; Kroll, 2013; Fitzgerald, Kruschwitz, Bonnet, & Welch, 2014). In a case study of Toyota Motor Corporation, Amasaka (2013) found that information management was critical to performance management. Information management is related to the three environmental supports of the human competence model: information, resources, and motivation (Fusch & Gillespie, 2012). Leaders bolster organizational management when they apply clear strategic objectives in conjunction with information technology that allows access to transparent, constant, and concise digital information (Bento, Bento, & White, 2014; Bianchi & Riverbank, 2012; Sa, 2013). In a 2013 survey of 1,559 executives in various industries, 78% stated that in two years, digital information would become an essential component of their businesses (Fitzgerald et al., 2014). Conversely, 68% of those same respondents indicated that their

organization was slow to implement digital information technology enhancements (Fitzgerald et al., 2014). Leaders of successful government entities take a proactive approach in improving information management, monitoring performance constantly (Jaksic & Jaksic, 2013; Mohammad et al., 2012; Resurreccion, 2012; Roy & Pershing, 2012). When leaders monitor performance closely through appropriate information management, they can address problems quickly (Bharadwaj, El Sawy, Pavlou, & Venkatraman, 2013). In a study of 1,050 public and private Turkish organizations, Ozer, Ergun, and Yilmaz (2014) found that effective information management positively affected performance. However, when leaders do not link information management to organizational performance management, adverse outcomes and ambiguous objectives may occur (Bharadwaj et al., 2013; Ozer et al., 2014). Abstruse missions, conflicting performance information, and inconsistent outcomes reduce organizational performance and clarity of work processes, producing undesirable effects (Bharadwaj et al., 2013; Jung, 2014a; Ozer, Ergun, & Yilmaz, 2014).

Performance management evolution and adaptability. Performance management links closely to strategic planning and evolves with an organization (Poister, Edwards, Pasha, & Edwards, 2013; Tongo, 2013). Based on the results from study of 236 public transit service agencies in the United States, Poister et al. (2013) found that when leaders align performance management principles with strategic planning, agency performance improved. The ideal model for performance management and strategic planning includes setting clear performance expectations and, in parallel, measuring that expected performance (Ikerionwu, Foley, Gray, & Edgar, 2014; Schraeder & Jordan,

2011). Kool (2012) reflected, based on a case study of the Dutch nature policy program, that standardization of program objectives may lead to difficulties concerning program adaptability. Kool inferred that the objectives of a government program should be dynamic. When goals, objectives, and practices change over time, leaders should mold performance management to meet those changing variables (Kool, 2012; Mohammad, Anvari, Saberi, 2012; Scott & Winiecki, 2012).

The variables related to performance are in constant flux, especially those relating to performance improvement (Jaksic & Jaksic, 2013; Mohammad et al., 2012; Resurreccion, 2012). These variables include performance information, supporting tools, mission clarity, motivation, and training. Leaders increase organizational success when they make efforts to understand and manage these variables (Jaksic & Jaksic, 2013; Mohammad et al., 2012; Rahman, Mondol, & Ali, 2013; Resurreccion, 2012). Rahman et al. (2013), based on a case study of 305 public and private sector workers in Bangladesh, concluded that strong work place support (e.g., clear performance information) had a positive relationship with employee performance. Cullen, Edwards, Casper, & Gue (2014), based on a study of 482 employees from pharmaceutical and hair salon companies, discovered that strong and consistent communication regarding changes in management processes and performance expectations improved employee performance and change acceptance. Setting clear expectations for accomplishments gives leaders control over performance management and strategic planning for changing variables (Schraeder & Jordan, 2011). Thus, performance management must be dynamic and adaptable.

Chen, Wang, and Chu (2011) noted, in a case study of the Hilton Hotel Corporation, that leaders must adapt performance management to changing environments and cultures, because performance management is a moving target for most organizations. Clearer expectations, objectives, and statements of valued accomplishments help stabilize performance management targets. Organizational leaders should link long-term strategic planning with performance management (Agwu, 2012; Poister et al., 2013). As an organization matures, performance management should progress apace (Kaufman & Bernardez, 2012; Mohammad et al., 2012).

Strategic purpose and administrative culture. At the heart of effective performance management are strategic purpose and administrative work atmosphere (Aldehayyat & Al Khattab, 2013; Mansor et al., 2011). The strategic purposes of a performance management system include aligning tactical or work-level processes to overall organizational goals (Aldehayyat & Al Khattab, 2013). Mansor et al. (2011) explained that effective organizations exhibit five strategic characteristics in performance management: (a) alignment of employee performance to overall organizational missions, (b) work environment clarity, (c) clear understanding of results achievement, (d) management and leadership that promote discretionary effort, and (e) straight-forward processes that allow supervisors and employees to see performance management as a part of their daily operations. Building on Mansor et al.'s 2011 work, Rhodes et al. (2012) concluded, from a study of public sector performance management in seven countries, that a focus on public interest, top-down approach, clarity of job expectations, established incentives for civil service, and multiple sources for ideas are the most significant factors

in the speed of reform in public sector performance management. Thus, work environment clarity, an environmental performance support, is an integral component in organizational performance (Al-Bourini, Al-Abdallah, & Abou-Moghli, 2013; Mansor, 2011; Rhodes et al., 2012). These performance management concepts are equally relevant to private and public organizations.

Performance Management in Government

Walker et al. (2010) noted that performance management is a contemporary issue in numerous nations. Members of the Organization for Economic Co-operation and Development and the World Bank have supported the use of performance management and measurement (Walker et al., 2010). Performance management programs exist in U.S. federal, state, and local governments as well as in the governments of China, Western Europe, the United Kingdom, the former Soviet states, and New Zealand (Walker et al., 2010).

Goh (2012) and Greiling and Halachmi (2013) both agreed that performance management leads to superior public service; however, U.S. federal agencies vary greatly in its implementation (Lee & Kim, 2012). Historically, leaders of U.S. federal agencies have had problems establishing well-defined missions and performance goals (Ames, 2015; Steinberg, 2012). U.S. Government Accounting Office (2010a) staff members stated that limited performance measures and management exist for the U.S. Coast Guard's 11 statutory missions. In summary, some U.S. government leaders have found it challenging to establish performance management processes, although the subject is at the heart of many government initiatives.

U.S. Coast Guard example. Although there is research on private sector performance management and measurement, there has been limited research on such measures in the U.S. Coast Guard. Ames's (2015) work was the only relevant U.S. Coast Guard study found. Ames concentrated on the whole U.S. Coast Guard Prevention Directorate and not specifically marine inspection. He found, based on a qualitative case study of the U.S. Coast Guard Prevention Directorate, that the GPRA requirements potentially impede effective performance management in the U.S. Coast Guard. Ames stated that the U.S. Coast Guard should internally manage the establishment of work accomplishments and performance management. Ames's work aligns with that of other researchers' in the literature review, in that government leaders must define an organization's desired end results with input from integral stakeholders supporting the achievement of those results. In the case of the U.S. Coast Guard Prevention Directorate, integral stakeholders may include U.S. Coast Guard personnel at policy, strategic, and tactical levels of the organization and regulated parties in the maritime industry. Ames stated that government leaders should not use a one-size fits all mentality when managing performance. Lavertu, Lewis, and Moynihan's (2013) findings from a comprehensive study of performance management initiatives in U.S. federal agencies support Ames' conclusion. In summary, contextual factors of an organizational appear imperative when discussing performance management.

Context as a problem. Contextual factors of an organization may impede the use of performance management. A standard performance management system that could be applied to all organizations likely does not exist. However, organizations still often utilize

a standard performance management system (Tan & Harvey, 2015). Botici, Garengo, Dorfler, and Nudurupati (2012) stated context is a factor when organizational leaders apply or implement performance management. Botici et al.'s statement aligns with what Goh, Elliott, and Richards (2015) discovered in a study of five Canadian public sector organizations. Goh et al. found that government leaders need to take a context-sensitive approach to performance management. Goh et al. also noted that government leaders should introduce performance management as an integral part of daily operations, and not depict performance management as an activity to mollify external reporting requirements. In a study of ten Indian oil industry companies, Akhtar and Mittal (2015) found that factors including holistic organizational buy-in, flow of internal data and information, as well as an incentive scheme are often problems when implementing a performance management system. Poister et al. (2013) noted context as a limitation of their study regarding U.S. public transit services. Farzana and Pinnington (2014) found, in a study of project management professionals, that clarification of context, strategic objectives, and transparency regarding performance indicators were keys to success. Di Mascio and Natalini's (2013) discovered, based on findings from a study of 169 Italian government authorities, that the most critical contextual factor in effective performance management is leadership stability in an organization. Di Mascio and Natalini stated that when leaders change frequently, the use and implementation of performance management is difficult. United States government agencies often have changing leaders, which may impede the effective use and implementation of performance management.

Performance management conundrum in government. Lee and Kim (2012) reported that the Government Performance and Results Act (GPRA) of 1993 changed the performance management landscape for U.S. federal agencies. This act obligated leaders of all such agencies to develop business plans, set performance goals, and report on their agency's achievements and the effectiveness of strategies implemented. However, government leaders have found the performance management movement arduous (Al Hijji & Cox, 2012; Goh, 2012; Lee & Kim, 2012). Baughman, Boyd, and Kelsey (2013), in a study of two Texas education agencies, found that accountability in connection with federal funding programs was limited. Moynihan and Kroll (2015) noted, in their study of public service employees in the U.S. government from 2007 to 2013, a critical factor in performance management success for U.S. federal agencies is the context of changing executive level leadership. If and when executive leadership in the U.S. government chooses to overhaul the incumbent performance management processes, the current system will likely falter. Consequently, issues concerning agreement on goals, accountability, responsibility, context, and appropriate measurement trouble government leaders (Al Hijji & Cox, 2012; Goh, 2012; Lee & Kim, 2012).

Bianchi and Riverbank (2012) and Newcomer and Caudle (2011) stated that many government leaders understand the need for performance management; however, their application of performance management is not always appropriate or effective. Relatedly, Halligan, Sarrico, and Rhodes (2012) noted there is a need for studies regarding performance management in government agencies. Performance-based management supports evaluation and development of key personnel and improved organizational

performance (Hoontis & Kim, 2012; Teeratansirikool, Siengthai, Badir, & Charoenngam, 2013). Nonetheless, implementation of these performance management principles can be complex when leaders must coordinate many diverse elements (Bianchi & Riverbank, 2012; Rosen & Levy, 2013). A multitude of performance goals (which often creates goal ambiguity), politics, program adaptability, and congressional engagements all play a role in the performance management web (Bianchi & Riverbank, 2012; Rosen & Levy, 2013; Van Dooren, 2011). Clear organizational goals and agreement among management personnel are the foundations of successful performance management systems for any organization (Newcomer & Caudle, 2011). Once government leaders establish clear organizational goals and missions, holistic performance management can occur (Newcomer & Caudle, 2011).

From the executive branch down. Bianchi and Riverbank (2012) and Newcomer and Caudle (2011) found that the executive branch of the U.S. government places performance management at the forefront of legislation. Kendrick (2011) noted that U.S. government officials have instituted performance-based programs in the past, including total quality management and other initiatives. Newcomer and Caudle reported that in the 1990s the Clinton administration developed the National Performance Review, which centers on results-oriented government management. Members of the Bush administration went a step further and placed performance objectives in the President's Management Agenda (Newcomer & Caudle, 2011). The same administration also established the Performance Improvement Council and performance improvement officers for all government agencies (Newcomer & Caudle, 2011).

Kendrick (2011) found that Obama administration personnel have continued the efforts of previous administrations, promoting goal setting, performance management, data-driven analyses and decisions, and related performance reviews. Newcomer and Caudle (2011) noted that the Obama administration also appointed the first chief performance officer. Schwartz (2011) reported that in a 2009 address to Congress, the first chief performance officer promised to take a supportive rather than a compliance approach toward performance improvement and management, to promote collaboration, teamwork, and efficiency. Lavertu and Moynihan (2013) related that the Obama administration emulated a British government process by setting high-level goals, using associated performance dashboards, and promoting cross-agency dialogue for performance data transparency. Performance management is at the forefront of U.S. government policy and activities (Lavertu & Moynihan, 2013; Schwartz, 2011).

Holistic management of performance. Kendrick (2011) stated that performance management in all types of organizations should encompass the three organizational levels—policy, strategic, and tactical—an imperative that is consistent with Gilbert's (2013) performance matrix. Anitha (2014) found, in a study of small industries in India, collaboration and communication regarding performance at all levels of an organization can bolster the holistic management of performance. Holistic performance management involves (a) the establishment of objectives and goals, (b) the development and execution of strategies to realize them, and (c) the measurement of their realization (Moynihan & Kroll, 2015; O'Boyle & Hassan, 2013). The advantage involved in performance management derives from the usefulness of the system (Kendrick, 2011). A system may

be useful primarily because executives, supervisors, and employees collaborate on decisions and outcomes, in addition to establishing goals, executing strategy, and measuring performance (Kendrick, 2011). In addition, managers may increase effectiveness simply through minimal interactions promoting collaboration at a tactical level (Anderson & Klaassen, 2012).

A top-down approach to creating a long-lasting performance management system begins with policy-level manager input and concludes with tactical-level employee input (Kendrick, 2011; Waal & Counet, 2009; Sutheewasinnon, Hoque, & Nyamori, 2016). The orderly inclusion of top-level and subordinate organizational members in the system may bolster collaboration. In a study of educational institutions, Ghosh (2015) found that commitment at the top-level of an organization regarding performance management is critical. Ghosh also noted that the top-down approach must connect to employees on the front lines to be effective. The problem with this approach is that some policymakers have no systems in place to hold themselves accountable to their high-level goals (Akbar, Robyn, & Perrin, 2015; Kendrick, 2011). Thus, leaders should define performance measures at each level, beginning at the top and working downstream for subordinate performance measures (Kendrick, 2011).

Pulakos, Hanson, Ara, and Moye (2015) stated that stakeholder involvement at all levels of an organization can bolster commitment to performance measures and is correlated with organizational success. Because of the different performance outcomes sought at each level, an organization may benefit from strategy and impact mapping, or program-logic modeling, for the systemic compilation of performance measures, holistic

goals, and strategy alignment (Kendrick, 2011; Schläfke, Silvi, & Möller, 2013). Strategy mapping is a visual representation of system components connecting a tactical-level task to a policy-level mission or objective (Kendrick, 2011; Schläfke et al., 2013). Farshard (2012) stated that strategy mapping allows organizational leaders to visualize business strategy and how the organization will create value. Strategy mapping may aid leaders in the development of a long-lasting performance management system (Schläfke et al., 2013). de Salas and Huxley (2014) found, based on a case study of three medium-large-sized organizations, that strategy mapping can help organizational leaders connect tactical level tasks to policy level objectives, leaders can logically and visually connect all activities and work accomplishments of an organization. The strategy map allows leaders to understand how a lower-level objective supports a higher-level objective. Thus, leaders know the criticality of even the lowest level job routine.

Performance and value. Organizations are in the business of creating value for stakeholders (Harrison & Wicks, 2013; Mzera, 2012), and both private and public organizational leaders seek to provide that value (Addison & Tosti, 2012; Harrison & Wicks, 2013; Vanlandingham & Drake, 2012). Leaders must first determine what accomplishments create such value for an organization (Gilbert, 2013), and those valuable accomplishments must be consistent with organizational goals and objectives (MacDonald, 2012). In government, value can be anything from quality service, to saving a life, to a security presence. Government leaders and their subordinate entities worldwide seek to improve performance and organizational value (Hawke, 2012; Peignot, Peneranda, & Amabile, 2013; Van Dooren, 2011). Those leaders often follow

similar paths toward performance management and attainment of value (Kendrick, 2011). Leaders of a government organization must define the value that their employees provide to relevant stakeholders, including taxpayers and citizens (MacDonald, 2012). Bianchi and Riverbank (2012) discussed generating awareness of performance management in government and educating policymakers to legislate for results. Government leaders and policymakers should appreciate the power of effective interdepartmental communication and develop strategic, policy, and tactical indicators that provide real value for taxpayer dollars (Rosa, Morote, & Colomina, 2013; Vanlandingham & Drake, 2012). Rosa et al. (2013), in a study of Spanish government homecare services, found that leaders' communication of performance indicators was essential for superior performance and presentation of taxpayer value derived from public services.

Value from trust. Efficient performance strategies are critical for manifesting organizational objectives and presenting transparent value (Sole & Schiuma, 2010). U.S. public sector leaders have received negative feedback concerning trust, transparency, and integrity regarding their organizations and those assessments reduced the perceived value of the organizations (Mizrahi, Vogoda-Gadot, & Van Ryzin, 2010). Clear expectations and objectives, linked with supportive processes, improve public policy and service as well as stakeholder trust in government organizations (Muhammad & Islam, 2012; Abdullah & Tari, 2012; Sole & Schiuma, 2010). Government organizations have diverse stakeholders interested in their performance (Sole & Schiuma, 2010). Effective service execution, judicious use of taxpayer money, and transparent results are all overarching objectives of government organizations and provide value for their customers (Sole &

Schiuma, 2010). Cordella and Bonina (2012) stated that public value is determined through the aggregation of individual preferences in a given society. The researchers also clarified that public value is measured by the cost efficiency of established government and civil services. Therefore, leaders of those organizations must have multidimensional definitions of performance and corresponding measurements to deliver stakeholder value with transparency and trust (Gilbert, 2013; Sole & Schiuma, 2010).

Performance information overload. Van Dooren (2011) discussed performance management in public organizations from a different perspective. He theorized, in congruence with Gilbert's (2013) work, that results are what matter, and the number of organizational activities is not as important as the outcomes of those activities. However, he also concluded that performance measurements of essential variables and outcomes are sometimes not possible. Van Dooren's work contrasts with Gilbert's (2013) conclusion that all performance is measurable. Even given these contrasting views, Gilbert and Van Dooren both concluded that, to reduce complexity, performance management requires consistent discussion between members at all organizational levels.

Organizational leaders should validate or amend performance goals, measures, and indicators regularly (Mohammad et al., 2012; Van Dooren, 2011; Yongjin, 2013; Zhang & Wu, 2014) in response to changing contextual factors and industry variables (Mohammad et al., 2012; Yongjin, 2013; Zhang & Wu, 2014). Performance measures should include both quantitative and qualitative measures to bolster performance information (Mohammad et al., 2012; Van Dooren, 2011; Yongjin, 2013; Zhang & Wu, 2014). Klarner, Sarstedt, Hoeck, and Ringle (2013) found, in study of 90 strategy-

consulting projects, that adaptability is an essential factor for success. For example, government agency leaders must take into consideration the need for real data concerning the political context of performance management (Van Dooren, 2011). Organizations should have an adaptable performance management and measurement focus in all relevant operational processes (Hvidman & Andersen, 2015; MacBryde, Paton, Grant, & Bayliss, 2012).

The influences of context, real data, and adaptability are critical when discussing performance management in government agencies because the incorrect application of these three factors in performance management can damage an organization (Van Dooren, 2011). Government decision-makers manage large amounts of information, from budgets to audits, and make decisions often without reviewing all of the information (Van Dooren, 2011). Government organizations need to begin with clear and understandable performance management information for decision makers to make sense of what otherwise constitutes information overload (Allio, 2012; Van Dooren, 2011). Government leaders should prevent analysis paralysis by using performance management principles (Allio, 2012; MacBryde et al., 2012; Van Dooren, 2011). Effective performance management in government organizations can improve stakeholder trust, cooperation, and commitment, (Mone, Pop, & Racolta-Paina, 2013).

Future of performance management in public organizations. Hatry (2010) claimed that performance management systems for government organizations will change drastically over the next few decades, and future leaders will expect them to be transparent, holistic, adaptable, and intuitively digitized. Government performance

management may evolve to comprise complete transparency, ease of access, and the ability to present performance information in real time. Hatry's point concerns the ability for government leaders to harness technology. Government leaders who harness advanced technology at lower cost should benefit greatly from their foresight regarding cost management (Halachmi, 2011; Hatry, 2010; Mansor et al., 2011; Panza, 2012).

Defining valuable accomplishments, appropriate goals, and the most efficient use of government capital (including human capital) aligns directly with the advancement of technology (Halachmi, 2011; Mansor et al., 2011). Organizational leaders need to frame performance management on the basis of defined missions, objectives, and expectations (Ayers, 2015; Hawke, 2012; MacBryde, et al., 2012). Public administrators and managers will likely have a plethora of data, reports, and research readily available in the coming decades (Hatry, 2010), and their challenge will be to extract the essential information using advanced technology to make informed decisions (Hall, 2012; Hatry, 2010; Panza, 2012). Leaders should have technology tools appropriate to the job of transforming data into essential information for effectively managing performance (Hall, 2012; Hatry, 2010).

A final note is that the organizational structure of a governance system is not the central factor that leads to superior performance (Fenwick & Karen, 2012). Moynihan and Kroll (2015) stated a governance system alone is not sufficient without clearly defined work accomplishments (Moynihan & Kroll, 2015). Akbar (2015), in the context of the Pakistani government, clarified that certain performance factors must exist for a corporate governance system to lead toward superior firm performance. Those factors

included performance requirements regarding performance evaluation, board make-up, communication objectives, and social responsibility goals (Akbar, 2015). Leaders should clarify the ends or results of a system to achieve appropriate performance management and an appropriate governance system (Mononen & Leviakangas, 2016).

The literature has revealed the need for clear organizational objectives and accomplishments, strong supporting tools, and a focus on performance management. The next portion of the literature review covers performance management research pertinent to the purpose of this study. The topics include (a) efficiency, outputs, and outcomes related to value; (b) barriers to performance improvement; (c) performance measurement and potential for improving performance (PIP); (d) performance and organizational learning; and (e) performance integration.

Topics Relevant in Performance Management Research

Efficiency, outputs, and outcomes related to value. Three types of measures are necessary in performance measurement: efficiency, output, and outcomes (Ammons, 2013; Sole & Schiuma, 2010; Van Dooren, De Caluwe, & Lonti, 2012). Efficiency is the relationship between inputs and outputs in any system (Sole & Schiuma, 2010). Output measurements are counts of activities conducted or products produced (Sole & Schiuma, 2010), and outcomes are measures of the overall results that stem from a holistic organizational system (Sole & Schiuma, 2010).

U.S. government leaders have measured outputs for decades, but they are not necessarily effective in monitoring and measuring performance (Ammons, 2013). Ammons (2013) stated, based on a study of government service performance in the

United States, that outcomes concerning efficiency display a clearer picture of organizational performance; however, one major problem for government organizations lies in defining outcomes. Webb and Candreva (2010) provided a case study of the U.S. Navy's Surface Warfare Enterprise and found that the Navy did an excellent job of measuring outputs but often did not clearly define the outcomes sought. Webb and Candreva's work relates closely to Van Dooren's (2011) point regarding the difficulty of developing performance outcomes. Research on the valuation of U.S. government agency outcomes may benefit the field of performance management (Koliba, 2011).

Barriers to performance improvement. Halachmi (2011) provided a problematic context for performance management in government agencies in his discussion of major problems and roadblocks. Although his work is not exhaustive, the roadblocks he noted ring true for this study: (a) lack of organizational commitment, (b) misalignment of objectives, (c) ineffective communication and information management, and (d) measurement difficulties.

Lack of organizational commitment. Prabhu and Hegde (2012) stated, based on a case study in India, that limited organizational commitment to performance management principles is the primary roadblock to strong performance management. An organization's leadership must demonstrate commitment or performance will decline (Halachmi, 2011). Consequently, five characteristics of government systems can present challenges that affect organizational commitment to public sector performance management: (a) relationships, (b) prioritization of objectives, (c) organizational workplace climate, (d) distribution of power, and (e) intra-organizational stress (Conaty,

2012). Halachmi (2011) stated all five of these challenges originate from executive-level leadership in an organization.

Misalignment of objectives. Second, alignment of organizational objectives at all levels, from policy to tactical, is critical (Ayers, 2015; Conaty, 2012). When the objectives sought differ across organizational levels, the organization typically does not meet its highest-level accomplishments and objectives (Halachmi, 2011). Qureshi and Hassan (2013) supported this point when they discussed misalignment of performance objectives as a barrier to performance improvement in a study of the McDonald's food chain.

Ineffective communication and information management. Third, ineffective communication and lackluster information management may hinder organizational performance (Halachmi, 2011). Strong communication among all stakeholders and an integrated (and up-to-date) data management system support successful performance management (Halachmi, 2011; Mansor et al., 2011). Leaders can create a strong foundation for customer processes, process management, and performance management through effective and adaptable information management capabilities (Mansor et al., 2011).

Measurement difficulties. Finally, some aspects of government service are challenging to measure (Halachmi, 2011). In a perfect world, a performance management system covers all factors of performance; however, some factors, including social effects, quality of life, and fiscal factors, are difficult to measure (Halachmi, 2011). Halachmi (2011) and Van Dooren (2011) have come to similar conclusions regarding how some

performance is immeasurable. Gilbert (2013) presented a model with which to address the intricacies of performance measurement and recommended beginning with validation of an organization's mission and the delineation of exemplary performance.

Performance measurement and potential for improving performance (PIP). As discussed previously, performance management relates directly to organizational strategic objectives (Gilbert, 2013). Gilbert discussed the art, or process, of measuring performance and presented a point of view that might contradict common thinking: He explained that any field or occupation can be measured, and he cited examples ranging from poetry to manufacturing. Business plans with clear performance measurement objectives help businesses stay on course, just as employees' personal goals help them navigate careers and complete pertinent development processes (Simoneaux & Stroud, 2012). Employees have a higher probability of achieving individual success when organizational leaders make their expectations clear, promote accountability, and monitor and measure accomplishments (Simoneaux & Stroud, 2012). Gilbert elucidated this potential, in any context, with his PIP model by defining clear expectations and performance measurements.

Gilbert (2013) presented the PIP as a measure to gauge the possibility of improving performance. Comparing exemplary to nonexemplary performance yields a PIP. Gilbert recommended using the exemplar as the standard to which to compare any other instance of performance. This process relates closely to Simoneaux and Stroud's (2012) great expectations and maximum performance. Simoneaux and Stroud stated that the previous greatest achievement of performance represents the benchmark for a

performer's performance. Beus and Whitman (2012) and Toker and Moseley (2013) also stated that performers' should benchmark their performance based on the previous best instance of performance. The exemplar has the value of the previous greatest achievement of a given performance (Gilbert, 2013). The PIP changes dynamically when an individual or organization discovers a superior way to perform. The PIP is a ratio that compares exemplary performance to inferior performance. A basketball player's free throw percentage is an example. If the exemplary free throw percentage is 96%, and an average player's percentage is 70%, the average player's PIP equals 0.96/0.70, or 1.37. PIPs within the sports world normally are less than two, but PIPs in business are usually much higher (Gilbert, 2013).

Performance and organizational learning. Measuring performance and monitoring the PIP are useful in almost every aspect of a business. Aligning marine inspector performance management closely to Gilbert's (2013) work may allow U.S. Coast Guard leaders to determine the readiness and competence of the marine inspector workforce. Nonetheless, policy- and strategic-level U.S. Coast Guard leaders have had unclear performance oversight of their inspectors (Ames, 2015; USCG, 2012), and the measurement of marine inspection competence and performance can be challenging (USCG, 2012).

Gilbert (2013) stated that the reason for difficulties in measuring performance is that people equate behavior with competence, but the two are completely different, although closely related. Organizations should measure the achievement of their end goals to clarify competence, not the means or behavior used to achieve that end (Gilbert,

2013). The means become relevant only when the end is well defined (Gilbert, 2013). Proactive leaders accept change regarding performance outcomes (Greiling & Halachmi, 2013). They understand that performance is dynamic, depending on a given performer's environment, and they adapt to promote competent performance designed to achieve an established end (Gilbert, 2013).

In tandem with flexibility of objectives, previously discussed, organizational leaders should seek to establish learning organizations (Greiling & Halachmi, 2013). In a study of social service firms in Singapore, Tan and Harvey (2015) found the need for the organizational learning to improve performance. Tan and Harvey described organizational learning as employee work routines that use performance information and feedback to promote innovation and change in an organization. In creating a learning organization, leaders (a) share a vision with all employees, (b) maintain competent employees, (c) promote teamwork, and (d) allow current systems to be questioned (Greiling & Halachmi, 2013). Learning that promotes innovation, adaptability, and creativity enhances the enthusiasm of organizational members (Greiling & Halachmi, 2013). Chen et al. (2011) and Schraeder and Jordan (2011) agreed that incorporating flexibility with close alignment of goals and performance management are essential to success. Real, Roldan, and Leal (2014), in a study of 140 Spanish industrial companies, found that organizational learning has a positive effect on organizational performance. Creating a learning organization allows leaders to expand performance management and promote the dynamic system required to determine appropriate performance targets and valued accomplishments (Schraeder & Jordan, 2011). Organizational leaders thus should

put their performers at the forefront of strategic and organizational management decisions.

Performance integration. Phillips, Phillips, and Robinson (2013) found a 299% return on investment for a health and life insurance company when organizational leaders put employees first during normal business operations. This concept is consistent with Fusch and Gillespie's (2012) human competence model as well as the expectancy theory of motivation and the motivation-hygiene theory (Chyung & Vachon, 2013; Khan et al., 2013; Renko et al., 2012). When organizational leaders put employees first, they seek appropriate improvements in environmental supports and worker behavior (Chyung & Vachon, 2013; Khan et al., 2013; Renko et al., 2012).

Anitha (2014) found, in a study of small Indian industries, a strong connection exists between engaging employees and achieving work outcomes and increased productivity. The overarching objectives or valuable accomplishments defined by top management need to complement the logic of training and other organizational functions (Hawke, 2012). Interestingly, in a study of U.S. federal agencies over the past two decades, Kroll and Moynihan (2015) noted that training often did not support higher-level organizational objectives. As noted in Phillips et al.'s (2013) findings from a study of a health and life insurance company, when employee performance is the focus, organizational effectiveness should improve. Further, Ayers (2015) noted in a study of over 1,000 U.S. federal agencies, that when organizational goals are consistent with, and connected to, the individual employee, performance management can become useful at every level.

Goh (2012), based on a review of empirical studies, suggested that performance management promotes improvement and enhances learning through employee integration. Barrick, Thurgood, Smith, and Courtright (2015), based on a study of 83 credit unions throughout the United States, stated that leaders must think about employees when discussing long-term visions and decisions. Barrick et al. found that efforts to align organizational objectives with employee training and processes led to superior learning outcomes and better performance. Agwu (2012) and other researchers agree that such alignment can enhance performance and associated training (Carretero-Gómez & Cabrera, 2012; Meybodi, 2015). Organizational leaders cannot maintain a competitive advantage without analyzing their business with reference to managing employee performance (Jung, 2014b). Che-ha, Mavondo, and Mohd-Said (2014) stated, based on a study of 1,500 Malaysian businesses, that performance management promotes continuous learning and improvement in an organization and leads to innovation and proactive organizational behaviors.

The next section covers topics related to the development of performance improvement strategies based on existing performance management concepts and theory. The section includes content regarding each component of the human competence model. An overview of motivational theories that support Fusch and Gillespie's (2012) human competence model concludes the section.

Performance Improvement and Supporting Theories

A leader begins the process of performance improvement by exploring relevant organizational systems and the actions of personnel working in them, to gauge the current

level of performance (Gilbert, 2013). The next step is to identify the ideal (exemplary) performance of the relevant personnel and systems (Gilbert, 2013). Next, to identify performance improvement strategies, a researcher must collect data regarding pertinent performance behavior to close the gap between current and ideal performance (Gilbert, 2013).

To determine strategies for performance improvement, leaders should investigate both the extrinsic and intrinsic factors that influence performance (Fusch & Gillespie, 2012). Extrinsic work environment factors (the human competence model's environmental supports) are (a) information, (b) resources, and (c) incentives (Gilbert, 2013). Intrinsic individual factors (the model's worker behavior) are an individual's (a) skills and knowledge, (b) work capacity, and (c) motivations (Fusch & Gillespie, 2012). The next sections of this literature review cover topics relevant to defining ideal performance and identifying strategies for performance improvement that may help achieve that ideal performance.

Define the mission. To assess performance appropriately, a team, organization, or program needs clear expectations, goals, and accomplishments (Fusch & Gillespie, 2012). Leaders cannot succeed in performance management if they set incorrect objectives or missions, no matter how hard people work (Gilbert, 2013). If workers labor toward the wrong mission or accomplishment, they lose competence (Gilbert, 2013). Birkinshaw, Foss, and Lindenberg (2014) stated, based on 15 case studies of organizations, that clarifying an organization's mission to all its employees is paramount in performance and strategic management, organizational development, and overall

organizational management. Employees' understanding of the purpose and mission of an organizational unit is vital when exploring potential performance improvement strategies (Brauns, 2013). Performance, strategic, human resource, and other forms of management all center on the transparency of organizational objectives and missions (Brauns, 2013; Glarino, 2013).

An unclear mission can mean decreased performance for an organization (Qureshi & Hassan, 2013). In a study of performance management in the McDonald's food chain, a key finding was the need to align performance at all levels to the overall mission of the organization (Qureshi & Hassan, 2013). Employees of McDonald's at different organizational levels were unaware of the importance of their performance in supporting the organization's overall mission (Qureshi & Hassan, 2013). This lack of mission clarity on the part of employees hindered their performance at multiple organizational levels (Qureshi & Hassan, 2013). The McDonald's example further supports the need for an exploration of mission clarity in the U.S. Coast Guard MIP. Hence, I explored employee understanding and comprehension of the U.S. Coast Guard MIP mission, and used *mission clarity* as a basis for themes revealed in my study data.

Environmental supports. Work environment factors that affect performance are information, resources, and incentives (Gilbert, 2013). Organizational leaders may leverage these factors less expensively than they could intrinsic, individual factors to achieve a higher return on investment (Gilbert, 2013). The individual performance of an employee cannot surmount inadequacies in resources, appropriate information, or incentives in the work environment (Gilbert, 2013). Hence, potential improvement

strategies concerning the U.S. Coast Guard MIP related to the work environment have priority over worker behavior strategies.

Information. Information related to performance is defined as any expectation, requirement, feedback mechanism, goal, or fact needed to perform a given job or process (Fusch & Gillespie, 2012). Performance information is critical within any organizational system (Brauns, 2013; Karavardar, 2014; Manohar; 2013). Based on findings from a quantitative study of 700 employees in Turkey's fast food industry, Karavardar (2014) found that leaders who provide consistent and accurate performance information promote exemplary performance. Employees are likely to perform at high levels when organizational leaders consistently (a) establish clear performance expectations, (b) provide ongoing performance information regarding expectations, and (c) offer guidance on how to meet expectations (Brauns, 2013; Mulder & Ellinger, 2013).

Mulder and Ellinger (2013), in a comprehensive review of employee feedback literature, noted a positive relationship between consistent performance information and high levels of employee performance. Mulder and Ellinger found, in their study, that when organizational leaders provided effective performance information and feedback to employees; commitment, effectiveness, and work outcomes improved. Glarino (2013) stated that the main purpose of human resource management in a strategic setting is to support organizational objectives by enhancing the work environment. Managers who provide effective performance information and feedback enhance the work environment through one of Herzberg's satisfiers, performance recognition (Davoudi & Mousavi, 2012; Khan et al., 2013; Mulder & Ellinger, 2013). Five of my interview questions

related to appropriate information on performance in the U.S. Coast Guard MIP; thus, *information* was a component of the environmental supports category in this study's data collection.

Resources. Appropriate resources designed specifically for expected performance promote exemplary work (Gilbert, 2013). Environmental resources are a factor relating to the component of expectancy in the expectancy theory of motivation and the hygiene factor in Herzberg's motivation-hygiene theory (Bratton, 2013; Chyung & Vachon, 2013). When organizational leaders do not provide adequate tools, employees' motivation may decrease because they feel unable to meet performance expectations (Chou & Pearson, 2012; Renko, Kroeck, & Bullough, 2012). Chou and Pearson (2012) stated, in their study of information technology professionals, that when leaders provide adequate and effective resources to support employees in meeting performance expectations, employee motivation improves. Providing appropriate resources is a critical component in promoting exemplary performance (Gilbert, 2013; Giunta, 2012). Accordingly, *resources* was a component of the environmental supports category in this study's research data.

Incentives. Quratulain and Khan (2015) found, in a study of nine Pakistan public service organizations, that organizational leaders improve performance by providing rewards and incentives that employees value. The expectancy theory of motivation relates closely to incentives, in that the third of the theory's three components, valence, is a performer's valuation of a reward given for meeting expected performance (Vroom, 1964). An employee's motivation is a product of the three components of the expectancy

theory of motivation: If a performer's expectancy, instrumentality, or valence is zero, the performer will likely not be motivated to perform well (Vroom, 1964).

Leaders must consider these factors as essential components for performance management: (a) appropriate incentives, (b) the integrity of incentive production, (c) employee valuation of rewards, and (d) realistic performance expectations. My exploration of employee incentives within the U.S. Coast Guard MIP offered potential improvement strategies based on the expectancy theory of motivation. Therefore, *incentives* was a component in this study's data collection.

Worker behavior. Factors affecting the worker behavior part of the model are an individual's (a) skills and knowledge, (b) capacity, and (c) intrinsic motivations (Gilbert, 2013; Fusch & Gillespie, 2012). The worker behavior factors affecting an individual's performance are more expensive to address than are those external to an individual performer (Gilbert, 2013). Nevertheless, a person's skills and knowledge, inherent abilities (or capacity), and personal motives for achieving expectations are essential determinants to high performance (Fusch & Gillespie, 2012).

***Skills and knowledge*.** An individual performer may not have the skills and knowledge necessary to perform a given job. Kim, Williams, Rothwell, and Penaloza (2014) stated, based on a case concerning talent management best-practices from five Fortune 500 companies, that managers must train the individual, to add the appropriate skills and knowledge to the individual's repertoire. Such training is a performance improvement strategy managers may use when necessary (Kim et al., 2014).

Ameeq-ul-Ameeq and Hanif (2013) found in a study of hotel industry managers that employee training has a positive effect on employee performance. Carretero-Gomez and Cabrera (2012), in a banking industry study, found a 73% increase in performance after employees completed new skills and knowledge training. However, training is often expensive and decision makers should complete a cost–benefit analysis before using training as a strategy to improve performance (Carretero-Gomez & Cabrera, 2012). As stated previously, the application of performance improvement interventions regarding environmental supports is frequently less expensive than addressing worker behavior (Carretero-Gomez & Cabrera, 2012). Whether or not training is expensive, it is a factor in performance improvement. Consequently, *skills and knowledge* was a component of the worker behavior category for themes discovered in this study's data.

***Capacity*.** Employees should have the capacity to perform their jobs (Gilbert, 2013). If employees do not have the capacity to perform a job, negative outcomes may occur. Based on a study of information technology, telecommunications, food and beverage, and banking industries in Sri Lanka, Atapattu and Jayakody (2013) found that organizational leaders ought to consider the mental and physical demands of a job before assigning it to an employee. Even in a low-stress environment, workers may experience physical or mental fatigue that decreases their ability to perform effectively (Mehta & Agnew, 2012). Mehta and Agnew (2012) concluded that organizational managers must consider a worker's capacity to contend with the mental and physical demands of a task, even for common tasks such as computer work. For example, the researchers discussed the fact that computer operation may lead to work-related musculoskeletal disorders

reducing their capacity to work. In a different context, Savage and Torgler (2012) found that professional athletes often do not have the capacity to perform well in stressful situations. In light of these factors, *capacity* was a component of the worker behavior category for themes discovered in this study's data.

Motivations. Employees' internal motivations related to their jobs (Gilbert, 2013) affect their performance (Giauque, Anderfuhren-Biget, & Varone, 2013; Khan et al., 2013). However, Cerasoli, Nicklin, and Ford (2014), in a 40-year meta-analysis, found that there is contradictory research about the connection between intrinsic motivation and performance. Cerasoli et al. also noted that extrinsic motivation is a superior predictor of employee performance over intrinsic motivation. Seeking to improve performance by amending an employee's intrinsic motivation can present problems (Gilbert, 2013). However, Davoudi and Mousavi (2012) found, in a study of Iranian university faculty members, that when managers selected people with intrinsic motivations consistent with their jobs, the selection ordinarily had positive effects on the organization. Sun, Peng, and Pandey (2014) discovered, based on a study of three private and five public organizations in the northeast United States, that employees with high intrinsic motivation also perceived that their leadership provided well-defined organizational goals and objectives. An employee's intrinsic motivations relate closely to other factors that affect performance, making this factor an important component in performance management and improvement (Cerasoli et al., 2014; Lauzier & Haccoun, 2014; Sun et al., 2014). Accordingly, *motivation* was a component of the worker behavior category for themes discovered in the study data.

Holistic Overview

Effective performance management includes the three key components addressed in the framework of this study. First, an organizational leader should establish a clear mission and well-defined performance expectations to permit management of performance (Gilbert, 2013). Second, an environmental support system should be in place to promote exceptional performance (Fusch & Gillespie, 2012). This external support should include appropriate and transparent performance information, resources, and incentives that help an employee meet performance expectations (Brauns, 2013; Muo, 2013). Organizational leaders should ensure that performance information and incentives are evident and distributed equitably to all relevant performers (Chou & Pearson, 2012). Finally, a performer should have intrinsic skills, knowledge, personal motivation, and ability that support high performance (Mehta & Agnew, 2012). Organizational leaders should (a) provide appropriate training to develop employee skills and knowledge, (b) use defined selection requirements that speak to an employee's ability to complete the relevant work (Dasgupta, Suar, & Singh, 2014), and (c) create employee accession processes to build appropriate performance supports for a worker's personal motivations (Ameeq-ul-Ameeq & Hanif, 2013; Carretero-Gomez & Cabrera, 2012). In summary, when leaders use organizational performance management, they can create value for an organization by helping workers achieve clearly defined accomplishments.

Summary and Transition

Section 1 of this study included an introduction to the basis of the research, including the problem and purpose statements, research question, conceptual framework,

operational terms, significance of the study, and review of relevant literature. In summary, some government agency leaders have had difficulty using performance management principles (Lippuner, 2014). Advantages exist in using performance management principles to improve organizational performance (Cullen et al., 2014). The purpose of this qualitative single-case study was to explore strategies to improve U.S. Coast Guard marine inspectors' performance.

The literature review covered topics such as the components of the human competence model, which was the conceptual framework for the study, the significance of performance management, clarity of performance expectations, goal ambiguity in government organizations and appropriate supporting factors for the management of performance. Numerous articles and studies on performance management in government exist, but limited articles and studies address the U.S. Coast Guard MIP. The scholarly articles in the literature review helped me develop the foundation for this study.

Section 2 provides further detail on the nature of the study, the participants, and the research design. Section 3 includes the presentation of findings, recommended performance improvement strategies, suggestions for future action, and reflections on the process and results from my research.

Section 2: The Project

Section 2 includes all of the methodological aspects of the study, whose purpose was to explore performance improvement strategies for the U.S. Coast Guard MIP. I present the role of the researcher in the data collection process, a description of the process for participant selection, and the research method and design. The section includes a discussion of the selection and sampling of the population in order to create a clear foundation for data collection. The section concludes with an explanation (a) of what I did to ensure research integrity (methodological triangulation, multiple data sources, an audit trail, member checking), and (b) the connection to existing research and performance management models.

Purpose Statement

The purpose of this study was to explore strategies for improving U.S. Coast Guard marine inspection performance. An exploration of strategies to improve marine inspection performance appeared to be needed (Ames, 2015; Card, 2007; HSI, 2009; USCG, 2012). Using a qualitative single-case design, I explored ways to improve marine inspection performance—the vantage point for the study. The participant sample comprised 13 individuals, all from within the U.S. Coast Guard MIP. I conducted interviews in Washington, DC, in person and via telephone. U.S. Coast Guard marine inspectors constitute a unique population of individuals who inspect, examine, and monitor commercial vessels within U.S. territorial waters and vessels throughout Europe, the Far East, Hawaii, and Alaska (DHS, 2011). The marine inspector population of approximately 1,700 may benefit from the findings of this study (USCG, 2012). This

exploratory study produced improvement recommendations for serving and safeguarding the U.S. maritime industry and environment.

Role of the Researcher

I was the primary data collection instrument for this study. The researcher's role is to determine and remove, or at a minimum reduce, any bias that may affect the collection and analysis of the data (Marshall & Rossman, 2014; Tufford & Newman, 2012). I executed the design, strategies, and data collection techniques for this study in an ethical manner. The participants signed a consent form and their identities have remained protected because only unique identifiers and generic organizational job description information (e.g., marine inspector, operational manager, policy officer) were used. Data collection began when the U.S. Coast Guard Institutional Review Board (IRB) and Walden University's IRB granted permission to perform the research (Approval No. 02-16-15-0154837). I conducted semistructured interviews following an interview protocol and list of interview questions (Appendix A). I ensured that the data were triangulated through a review of U.S. Coast Guard MIP documents and interviews with participants at multiple organizational levels.

During the period of the study, I worked in the U.S. Coast Guard MIP as a system auditor for the Prevention Directorate. My office included only four auditors, and none of them participated in the study. The members of the U.S. Coast Guard IRB reviewed the proposal and provided a memorandum that permitted me access to participants and the conduct of the study (see Appendix B). I used U.S. Coast Guard Business Intelligence software to create a list of potential participants who met the purposive sampling criteria

described below. I solicited participants from 10 distinct U.S. Coast Guard MIP geographic regions. In addition, throughout the research process, I created an audit trail to document my actions during the collection, analysis, and presentation of data. Houghton, Casey, Shaw, and Murphy (2013) proposed that maintaining an audit trail reduces the possibility of research bias by making researchers continually aware of their personal opinions, beliefs, and postulations. An audit trail bolsters the dependability and confirmability of a study (Houghton et al., 2013). Cope (2014) went further and stated that an audit trail is essential to qualitative research and improves credibility of a study. Moreover, my international certification as a system auditor mitigated bias because of my oath to follow objective auditing and research principles. Finally, I was an active marine inspector for six years and completed over 1,000 vessel inspections. This experience gave me a better understanding than an outside researcher regarding the U.S. Coast Guard MIP.

Participants

I collected data within the MIP of the U.S. Coast Guard Prevention Directorate. The MIP consists of approximately 700 active and 1,000 inactive U.S. vessel marine inspectors (USCG, 2012). I am a marine inspector and had access to participants and data because of my position as a commissioned officer in the U.S. Coast Guard. This study included purposive sampling from multiple groups in the U.S. Coast Guard MIP. A researcher enhances validity of data for a study through purposive sampling of participants from different groups (Deodhar et al., 2012), and I used this technique to identify participants with applicable experience. Salih (2012) stated that purposive

sampling allows researchers to obtain specific perspectives related to a central question. Because purposive sampling allowed me to interview participants who could provide detailed perspectives related to my central research question, it was an appropriate sampling method for the study.

The participants were 13 MIP members, including civilian and active duty personnel. Yin (2014) stated that a specific sample size is not established or critical for case study designs. Instead, a researcher's preference for confidence in the case study findings will establish the sample size (Trotter, 2012). Literal and academic replication of the study findings is a crucial aspect in determining sample size in a case study (Yin, 2014). Interviews with relevant stakeholders provide a holistic dataset and limit alternative interpretations (Yin, 2014). Moreover, diverse participants promote validity and methodological triangulation in a case study (Heale & Forbes, 2013; Morse, 2015). Accordingly, the sample consisted of diverse participants, including three U.S. Coast Guard MIP policy-level managers, three operational unit managers, six marine inspectors, and one human resource administrator. Thus, the sample included members from the policy, strategic, and tactical organizational levels of the MIP, each of whom held at least four flag state (i.e., U.S. vessel marine inspection) qualifications.

My position as a commissioned officer gave me access to the study participants. I created a potential list of participants using U.S. Coast Guard Business Intelligence software. Potential participants received an e-mail with a standard request to participate. Once participants indicated their interest in participating, they received the informed consent letter (Appendix B) and an overview of the study before the interviews took

place. The informed consent letter ensured the participants that they could withdraw from the study at any time.

Only I had access to the study data and know the identity of the participants. Keeping participants' identities confidential protects their jobs and personal information (Mitchell & Wellings, 2013). An encrypted hard drive and locked filing cabinet hold the completed consent form (Appendix B) for each participant. The case study database includes (a) a unique identifier for each participant's personal information, (b) interview data, (c) documentation review data, and (d) my data interpretation documents for member checking. The case study database resides on an encrypted external hard drive. Participants received identifiers in the form of P1–P4 for policy-level participants, S1–S3 for strategic managers, and T1–T6 for tactical-level marine inspectors.

Research Methods and Design

Methods

The purpose of this study was to explore potential strategies to improve marine inspector performance. I chose a qualitative method for this study over quantitative and mixed methods, to allow for flexibility and documentation of relevant findings (Myers, 2013; Yin, 2014). Qualitative researchers investigate unique human behavior and actions of participants, as contrasted with quantitative research that does not include open-ended investigation for a researcher (Bansal & Corley, 2012; Elingsson & Brysiewicz, 2012). When human behavior and participant views are relevant, a qualitative method is appropriate (Myers, 2013; Yin, 2014). Interviews and document review were essential to triangulating participant behavior, opinions, and views, making a qualitative method most

feasible for the proposed research. My experience and knowledge as a marine inspector also contributed to the validity of the study. Experience and knowledge aid a qualitative researcher in understanding the underlying themes in the responses and are key components of qualitative research (Trafimow, 2014).

Neither mixed nor quantitative methods were appropriate for this study. In contrast to qualitative studies, a quantitative method would not allow for an exploration of strategies within a given case via intrinsic flexibility (Bansal & Corley, 2012; Yin, 2013). Quantitative studies address large populations and samples and do not address the context of a unit of analysis (Myers, 2013). Context was important for the purpose of this study because only a small population was applicable to the research question. A lack of a proven framework and differing goals of quantitative and qualitative methods make mixed methods difficult to use for researchers (Larkin, Begley, Devane, 2014; Trafimow, 2014). Also, combining the data from qualitative and quantitative methods is challenging and could cause inconsistencies (Terrell, 2012). Accordingly, a mixed method was not appropriate for this study. A qualitative method was most appropriate for exploring performance improvement strategies.

Design

I used a single-case study design for this study. Case studies are ideal for exploratory assessments and are conducive to constructing analyses supported by real-life contexts (Conaty, 2012). The unit of analysis for this study, the U.S. Coast Guard MIP, is a government program for which limited control of data and events was available.

Moreover, the U.S. Coast Guard MIP is the federal agency solely responsible for marine inspection of U.S. vessels, making a single-case design suitable.

The case study literature has advanced with respect to what constitutes a contribution to case study research (Reddy, 2015). Researchers with rich case data offer new ideas, often (a) revealing unusual phenomena, (b) replicating or countering the findings in other cases, (c) eliminating alternative explanations, and (d) elaborating emergent concepts (Reddy, 2015). Case studies allow a researcher to illustrate underlying causal mechanisms and generate new insights for further inquiry (Trafimow, 2014). Researchers who use case studies may enrich the topic of study by making significant breakthroughs that connect a set of results to applicable concepts (Reddy, 2015). In this study, I explored only the strategies applicable to improving performance. A case study design was appropriate because it allowed for intrinsic flexibility, study evolution, and data saturation via triangulation using interviews at multiple organizational levels and review of relevant documentation.

Population and Sampling

The population of U.S. Coast Guard marine inspectors consists of an estimated 1,700 active and nonactive personnel, internationally known as flag state surveyors, depending on current job assignments (USCG, 2012). The sampling method best for this study was purposive. In purposive sampling, researchers select participants with the potential for detail-rich responses on the basis of knowledge, experience, and relevance to the research question (Masso, McCarthy, & Kitson, 2014). Purposive sampling aids researchers in choosing participants with skills relevant to their study (Masso et al.,

2014). Purposive sampling promotes information gathering across diverse areas of perspective, position, and practice in a given case (Masso et al., 2014). Purposive sampling can also increase the validity of a study and may provide rich and logical triangulation (Robinson, 2014).

The purposive sample for this study represented experienced personnel, multiple organizational levels, and ten geographic districts in the U.S. Coast Guard MIP. The U.S. Coast Guard MIP contains 11 marine inspector qualifications that represent a member's competence in inspection of U.S. vessels (USCG, 2012). Each qualification represents competence regarding the inspection of a distinct vessel type (e.g., small passenger vessels, barges, towing vessels) or vessel system (e.g., hull, machinery). Each participant held at least four inspector qualifications; thus, the sample offered a well-rounded view of the U.S. Coast Guard MIP. I ensured the use of sufficient participants to establish themes and promote data saturation. All nine of the U.S. Coast Guard geographic districts had representation in the participant sample, as did members at U.S. Coast Guard Headquarters. By interviewing experienced personnel and drawing data from multiple levels and geographic districts of the program, I discovered themes from numerous perspectives.

I used semistructured interviews to promote the discovery of themes in the study. Such interviews are a common data collection technique in qualitative studies (Rhee, Zwar, & Kemp, 2012) because they allow participants to provide in-depth responses to research questions (Rhee et al., 2012). These interviews benefited the study by providing a holistic understanding of participants' perspectives. The data collection also included

reviewing documents, as participants referenced or indicated applicable documents or archival records during interviews. I reviewed policies, historical documents, analyses, guides, and memoranda related to organizational structure and objectives, processes, performance review, establishment of expectations, and employee recognition. I verified participant eligibility using the U.S. Coast Guard's Business Intelligence software and obtained access and authorization to use the software through the sole administrator who authorizes the software's use outside normal operations. The case study database houses the validated eligibility criteria for each participant.

Ethical Research

To ensure an ethical approach to this study, I provided the participants confidentiality, transparency, and assurance of free-will participation. First, the study contained a consent form, as required by the U.S. Coast Guard IRB, to promote ethical clarity. Second, a withdrawal option gave the participants a choice to exit the interview at any time. Each participant received an explanation of the withdrawal option in a phone call, an introductory email, and the consent form. Participants understood they could submit an email or any other form of communication to me to withdraw from the study. Third, no incentives existed. Fourth, an encrypted external hard drive solely under my control will contain the case study database, interview data, and document analysis data for five years. Each participant received a unique identifier in the database, to ensure confidentiality. I used a catalog and coding system to capture and maintain the study data. I coded all collected data that had the potential to inadvertently indicate the identity of any participant. Finally, I attained approval from the Walden University and U.S. Coast

Guard IRBs to comply with ethical requirements. Any harm to participants was negligible in this study. The study appendices relevant to ethical research include an interview question form (Appendix A) and U.S. Coast Guard IRB approval memorandum (Appendix B).

Data Collection

Instruments

The researcher is the main data collection instrument in a case study (Houghton et al., 2013) and uses interviews, document analysis, participant observations, and other means as the active vehicles affecting the outcome of a study (Houghton et al., 2013). Hence, I was the primary data collection instrument for this study. Furthermore, researchers use document analysis and interviews to discover underlying themes and ideas within a study (Petty et al., 2012; Yin, 2014). Fusch and Ness (2015) and Morse (2015) noted that saturation of data through multiple credible sources and case levels strengthens the reliability and validity of qualitative research. I supported the reliability and validity of the study by using multiple participant groups and reviewing relevant documentation. Furthermore, this study included the use of U.S. Coast Guard Business Intelligence software to aid discovery of relevant participants for interviews. I documented the purposive sampling list of participants derived from the software for confirmability within the study.

In addition, the document analysis revealed underlying themes in marine inspection history. Yin (2014) stated that a thorough analysis of historical documents is

critical for a case study. The review of historical documentation included U.S. Coast Guard manuals and policy, guidance, and training materials.

A replicable process promotes reliability and the ability to transfer the framework of a study (Yin, 2014). Therefore, I used an interview question list to organize my interviews (Appendix A). Semistructured interviews are ideal when a researcher wishes to follow a prearranged list of questions in a conversational format (Yin, 2014). Researchers use this interview format in case study research to explore an established topic (Yin, 2014). A methodical approach to the interview question process also promotes a study's reliability and validity (Morse, 2015). I addressed mission clarity, environmental supports, and worker behavior, key topics in the literature review. Interviews allow a researcher to acquire thorough descriptions of participants' experiences (Yin, 2014). Semistructured interviews allow researchers to use follow-up questions to explore participants' responses in more depth and clarify any alternative interpretations, processes that support the validity of the data (Morse, 2015; Yin, 2014). The standardized format of the interview questions, follow-up questions, member checking of interviews, and use of documentation analysis (Houghton et al., 2013; Yin, 2014) ensured transferability and confirmability of the study. I established these further by disclosing to participants the study's purpose, data, and processes. I also maintained an audit trail to provide full disclosure of interview transcripts and data interpretation to participants to promote reliability and validity of the study.

Data Collection Technique

Yin (2014) recommended that researchers use an interview protocol. Therefore, I developed a protocol to collect all interview data, as follows:

1. Identify potential participants via U.S. Coast Guard Business Intelligence software.
2. Solicit participation in the study via an initial email to potential participants.
3. After participants indicate their willingness to participate in the study, send an email that provides an overview of the study, including the interview questions and a consent form.
4. Confirm a date and time for the interview by phone or email and answer follow-up questions, if applicable.
5. Use standard interview questions and include a record of any probing questions asked in each interview.
6. Send emails to all participants expressing gratitude for their participation in the study.
7. Transcribe each interview.
8. Allow the participants to check the transcriptions and my interpretations.

The initial contact with participants included a brief overview of the study, a request to participate, and a description of the interview procedure expectations. Once each participant confirmed participation, I made an appointment for the interview, sent the participant the consent form (Appendix B), and requested that the participant read and sign the form before the interview. The email notified the participants that they could

reschedule the interview or withdraw from the study at any time. The email also included the interview questions to help prepare the participants for the interviews. Each participant scanned and emailed the signed consent form to me before the interview. An Olympus VN-702PC Voice Recorder recorded each interview. The interview began with an overview of the study. Using the same list of questions for the semistructured interview promoted internal consistency. I noted any probing questions in a uniform manner for each interview. Thereafter, I transcribed the interviews and my probing questions. Finally, each participant received the transcribed interview and my data interpretations for member checking.

Yin (2014) indicated that interview data can provide a clear and transparent view of a person's experiences and outlook in a given area of research. Moreover, review of documentation and interviews provide a thorough construct of data collection for triangulation (Heale & Forbes, 2013). Walden University and U.S. Coast Guard IRB members approved the documentation review and design of the interviews and questions. I then conducted and transcribed the initial 12 interviews and reviewed relevant documents. Because the participants referred to the U.S. Coast Guard's Office of Personnel Management in the majority of interviews, I also interviewed a Prevention Directorate human resource administrator from that office. Each participant had the opportunity to review the transcripts and my interpretations to ensure the accuracy and validity of my findings. I catalogued the participants' information, responses, and the documentation reviewed, and saved key documentation components found during document analysis.

The data retrieved from the document analysis followed the same categorization as the interview data. The case study database contains the categorized document review data and other data found, and coding and analysis of the data took place using qualitative analysis software.

Data Organization

I sorted data from the transcribed interviews and document analysis into the categories of *mission clarity*, *environmental supports*, and *worker behavior* on the basis of Fusch and Gillespie's (2012) human competence model and Gilbert's (2013) emphasis on mission clarity in performance management. The environmental supports category contained the components of information, resources, and incentives. The worker behavior category comprised the components of skills and knowledge, capacity, and motivations. The case study database had data storage areas for each category and its respective components. The categories and components allowed for richer discovery of performance improvement strategies for the U.S. Coast Guard MIP. The performance improvement strategies related to environmental supports represent the least expensive actions (Fusch & Gillespie, 2012; Gilbert, 2013). I used the categories to prioritize the performance improvement strategies identified, then listed the recommended strategies in order of priority.

Data Analysis

The process of analyzing data from a case study to discover patterns is termed *structured analysis* (Reynolds, 2014). I used NVivo 10 qualitative data analysis software to aid in interpretation and analysis of the interview and document review data. The

NVivo software incorporated the uploaded case documents and interview transcripts that I used to derive data for the study. The software was useful because it offered numerous functions, including coding, analysis, document review, querying, and theme identification, that are not available in manual qualitative analysis. Further, the software helped me organize the database.

Categories for the study data were consistent with the three key components in existing models in performance management research. The identification of categories applicable in both interviews and document review permits researchers to merge evidence (Reynolds, 2014). Merging of documentary and interview data enabled me to merge evidence to support my observations. I conducted data analysis in parallel with data collection to address themes as they became apparent, which allowed for free-form data analysis. Yin (2014) stated that data analysis conducted concurrent with data collection provides a comprehensive analysis as themes become apparent in the data.

Once I coded the data and identified themes and descriptions through the analysis, I transformed the data to narratives that summarized the themes that had emerged in the majority of responses and case documents. Yin (2014) found that categorization of narratives allowed for data mining and organization of themes with tables or figures. Further, the use of free-form data analysis creates a coherent and comprehensible study (Reynolds, 2014; Yin, 2014). I used Yin's recommended methods.

Using the qualitative method required openness to interpretation, analysis, and varied possibilities of presentation for this study (Reynolds, 2014; Yin, 2014). The qualitative analysis software allowed me to discover themes that I might have missed had

I used manual codification and categorization. The interview questions and document analysis allowed me to discover themes related to the conceptual framework of the study.

Appendix A contains these interview questions:

1. How is performance managed in the U.S. Coast Guard MIP, aside from individual officer evaluation reports?
2. What is the U.S. Coast Guard MIP mission?
3. What are the motives for being a marine inspector?
4. What is an exemplar marine inspection?
5. How do marine inspectors receive performance feedback?
6. What information does a marine inspector need to complete the job?
7. What tools support the performance of marine inspection?
8. How is the current training conducted for marine inspectors?
9. How are marine inspectors selected for their positions?
10. How are marine inspectors' knowledge and skill maintained?
11. How is a marine inspector incentivized?
12. What do you feel are the barriers, if any, to exemplary marine inspection performance?

Reliability and Validity

Reliability

Reliability is the measure of the trustworthiness of a study (Erlingsson & Brysiewicz, 2012). I scrutinized the trustworthiness and truthfulness of my study to

achieve reliability. The following processes ensured that the data were consistent, reliable, and relevant to the study topic.

I documented the steps of my study using a case study database and audit trail, to promote its consistency and credibility. The database contained the data I collected, and the audit trail included actions I took to increase reliability. Documenting the steps in a project's procedures creates a transparent and credible view of a study (Cope, 2014). If a researcher can replicate the research, it is trustworthy (Thomas & Magilvy, 2011).

Triangulation is a key component of reliability (Marshall & Rossman, 2014). I sought to produce replicable, consistent, and methodologically triangulated data through the interview protocol and review of documents. The inclusion of the document review and interviews with participants from multiple levels of the U.S. Coast Guard MIP supported methodological triangulation within the study.

I used categories from existing research models of performance management to link related observations found in the interviews and document analysis to performance improvement strategies. When a researcher connects existing research to multiple data sources in the study clearly, the connection promotes reliability (Thomas & Magilvy, 2011). By basing the processes previously mentioned on existing relevant research, I demonstrated a performance management research framework for future researchers, thereby substantiating the relative transferability of the study (Yin, 2014).

Validity

Thomas and Magilvy (2011) stated that validity is the overall quality of a study. I used qualitative techniques to promote the study's validity. Multiple data sources,

member checking, use of a conceptual framework supported by relevant research, experience with a case, and maintaining a study audit trail promote validity of a study (Reddy, 2015; Yin, 2014). First, the multiple strategies I used in my study, as well as the data collection techniques, promoted validity. Second, the participants' reviewing of my data interpretations promoted validity and credibility in the study. The participants validated the accuracy of their interview transcripts and ensured that my interpretations reflected the precise meaning of their perceptions and the program documents I reviewed. If the participants found errors or omissions, I made relevant amendments to the interview transcripts and interpretations. Member checking is a critical component in the validity of a qualitative study (Harper & Cole, 2012; Reilly, 2013). Further, to ensure contribution to related research, the conceptual framework promoted adherence to established performance management research practices via the human competence model and behavior-engineering model (Fusch & Gillespie, 2013; Gilbert, 2013). I ensured that my interpretations of the participants' responses were valid with respect to data categorization and themes based on the conceptual framework. Third, as stated previously, because of my career experience of ten years in the marine inspection field, I have gained an in-depth understanding of the participants' views. I was a marine inspector for six years, and then a Prevention Directorate auditor for four years. I have a thorough understanding of the case. A thorough understanding of a case increases the dependability of a study (Yin, 2014). Finally, I maintained a detailed and accurate record of the steps followed in the study framework and maintained an audit trail. I presented detailed descriptions of the purposive sampling criteria, document review, and interview

protocol to enable replication and transferability of the study. Moreover, participants provided rich data for the study that allowed interpretation of the findings for possible transferability to other similar contexts.

Summary

Section 2 covered essential elements of the design, validity, and reliability of the study. The purpose of this qualitative case study was to explore strategies to improve the performance of the U.S. Coast Guard MIP. The unit of analysis for the study was the U.S. Coast Guard MIP. I used existing performance management research to support the exploration of strategies for performance improvement. I used existing performance management research to support the exploration of strategies for performance improvement. The use of methodological triangulation with multiple sources of data in the study design, plus a case database with a well-documented audit trail, supported the reliability and validity of the study. My use of existing models should allow other performance management researchers to build on the study findings.

Section 3 of this study contains an overview of the findings from this qualitative single-case study, supported by categories derived from existing performance management research. I present the findings in the following manner: (a) relevance to management practice, (b) suggestions on how to use the findings to stimulate social change in a positive manner, and (c) suggestions for action in the future. Finally, Section 3 includes a personal reflection on the study and recommendations for future research on performance management.

Section 3: Application to Professional Practice and Implications for Change

Introduction

The purpose of this qualitative case study was to explore performance improvement strategies for the U.S. Coast Guard (MIP). The study population included participants from policy, strategic, and tactical organizational levels of the MIP. Each participant held at least four U.S. vessel marine inspector qualifications, and collectively they represented all nine U.S. Coast Guard geographic districts and U.S. Coast Guard headquarters.

Maritime industry personnel, congressional stakeholders, and internal U.S. Coast Guard leaders have stated that the performance of the U.S. Coast Guard MIP requires improvement (Card, 2007; HSI, 2009; USCG, 2012). In an internal analysis of the marine inspector's job, U.S. Coast Guard members found that 41% of marine inspectors were not confident interacting with maritime industry personnel concerning marine inspection issues (USCG, 2012). The participants in my study shared their views and experiences about the MIP. I categorized the findings into themes related to components of Fusch and Gillespie's (2012) human competence model. The findings included potential areas of improvement related to mission clarity, information resource provision, incentives, skills and knowledge management, selection criteria, and intrinsic motivation regarding marine inspection. My recommendations for performance improvement strategies are based on the themes discerned from the perceptions of the participants and my review of documents.

Presentation of Findings

The primary research question for this study was *What strategies do U.S. Coast Guard leaders need to improve the performance of the marine inspection program?* The participants represented all nine of the U.S. Coast Guard geographical districts and U.S. Coast Guard Headquarters, totaling ten distinct geographic locations. All met the criterion of holding at least four marine inspector qualifications to inspect U.S. flag vessels. I completed semistructured interviews with 13 MIP personnel at three distinct organizational levels: three policy-level managers, one policy-level human resource administrator, three strategic-level managers, and six tactical-level marine inspectors. I reviewed documents referred to or implicated in the interviews.

A literature review of peer-reviewed articles and other studies generated a foundation for conceptual components connected to the central research question. Following Yin's (2014) recommendation regarding an interview protocol, I developed a semistructured interview protocol informed by Fusch and Gillespie's (2012) human competence model. Once I completed each interview and did the associated member checking, I coded them following procedures recommended by Yin (2014). I used unique identifiers for each participant: (a) P1, P2, P3, and P4 for policy-level participants; (b) S1, S2, and S3 for strategic-level participants; and (c) T1 through T6 for tactical-level participants. I identified recurring participant phrases and words and used them to establish interview data interpretations. I then developed general interpretations from the interview data for coding. The participants validated their transcripts and my corresponding data interpretations of their interviews. The member checking validated

my data interpretations to support the themes I discovered in the study. Table 1 displays the interview questions, related conceptual framework categories, and coded themes.

Table 1

Interview Questions, Conceptual Framework Components, and Coded Themes

	Participant question	Conceptual framework categories and component(s)	Coded theme
1.	How is performance managed in the U.S. Coast Guard MIP, aside from individual officer evaluation reports?	Mission clarity, environmental supports, worker behavior	Qualification attainment
2.	What is the U.S. Coast Guard MIP mission?	Mission clarity	Protection of people, property, and environment; facilitation of commerce
3.	What are the motives for of a marine inspector?	Worker behavior	Personal satisfaction
4.	What is an exemplar marine inspection?	Mission clarity, environmental supports	Quality inspection, individual judgment
5.	How do marine inspectors receive performance feedback?	Environmental supports: Information	Informal and formal feedback
6.	What information does a marine inspector need to complete the job?	Environmental supports: Information, resources	Information to conduct inspection, varying information sources
7.	What tools support the performance of marine inspection?	Environmental supports: Information, resources	Training, resources, information to conduct inspection
8.	How is training conducted for marine inspectors?	Worker behavior: Skills and knowledge	Inconsistent training, expert power
9.	How are marine inspectors selected for their position?	Worker behavior: Capacity	No selection criteria, personal initiative
10.	How are marine inspectors' knowledge and skills maintained?	Worker behavior: Skills and knowledge	Skills and knowledge maintenance through repetition, individual initiative, inconsistent training
11.	How is a marine inspector incentivized?	Environmental supports: Incentives	Personal satisfaction, marketability outside the

(*table continues*)

			U.S. Coast Guard, promotion, advancement, qualifications
12.	What do you feel are the barriers, if any, to exemplar marine inspection performance?	Mission clarity, environmental supports, worker behavior	Inconsistent training, resources, incentives, promotion, advancement, qualifications, competing demands

Several common themes emerged from the study data:

1. Ambiguous mission: Participants' perceptions indicated that marine inspectors may need a clarified mission.
2. Provision of information sources for marine inspection: Resources that contain pertinent information for marine inspectors may not be consistently provided or available.
3. Individual information and knowledge management systems: Marine inspectors often develop their own information and knowledge management systems to determine applicability of requirements and regulations for vessels they inspect.
4. Qualification leads to promotion: Participants perceived that qualification attainment was the main performance measurement for marine inspectors, leading to inspectors' primary incentive being career advancement because other formal incentives were limited.
5. Differences in skills and knowledge management: Participant responses indicated that differences between U.S. Coast Guard units may exist concerning marine inspector training and professional development.

6. Nonstandard selection criteria for marine inspector positions: None of the participants knew of standard selection criteria for marine inspector positions.
7. Positive job perception: Each participant expressed pride concerning the job of marine inspection.

Theme 1: Ambiguous Mission

Organizational leaders must establish clear expectations and objectives at all organizational levels (Aziz & Fady, 2013; Muo, 2013). Organizational success is compromised when the mission of an organization, program, or department is not apparent or clear to employees. I identified four possible mission themes for marine inspectors, illustrated in Table 2.

Table 2

Conflicting Marine Inspector Missions

Coded themes	# of participants who offered this perception	% of participants who offered this perception
1. Protection of people, property, and environment on U.S. navigable waterways	13	100
2. High quality, well-communicated, and timely inspections	13	100
3. Qualification attainment	13	100
4. Facilitation of commerce	6	46

The participants gave multiple perceptions with respect to the mission of U.S. Coast Guard marine inspectors. First, in response to question 2, all the participants

referred to a high-level Prevention Directorate mission related to the promotion of safety, environmental protection, and mitigation of property damage on U.S. navigable waterways (HSI, 2009). Second, all participants indicated that an exemplary marine inspection is one that is well-communicated, comprehensive, and timely. Third, and in contrast to the first two, all participants expressed that the main performance objective stated in the U.S. Coast Guard MIP was qualification attainment. The U.S. Coast Guard 2012 Strategic Needs Assessment supported this perception regarding qualification attainment and contained a definition of an optimal marine inspector as one who

- has an in-depth technical knowledge of the maritime transportation system, including vessel components, policies, and regulations;
- demonstrates thorough understanding and correct application of regulations, policies, and technical information;
- is capable of balanced decisions and a consideration of how they affect commerce, public safety, and environmental risk;
- is committed to the U.S. Coast Guard marine safety mission;
- promotes self and others in continued professional and inspector development; and
- is recognized as a leader in the marine inspection community (USCG, 2012, p. 2).

The definition of an optimal marine inspector appears to promote qualification attainment as the mission of marine inspection. Participants perceive the mission, as it relates to performance measurement for marine inspectors, as qualification attainment. Finally,

46% of participants related that a marine inspector's mission is to facilitate maritime commerce. I did not find a definition of the marine inspector's mission in my review of marine inspection policy and guidance. More specifically, I did not find a defined or identified valuable accomplishment for individual inspections or the MIP. In summary, the participants were not aware of an established marine inspector mission, and their responses indicated a potentially ambiguous mission.

The participants had differing opinions on the mission of marine inspection. At the policy-level, P1 stated that "from the 100,000-foot level, it is compliance, security, and environmental protection." P4 explained, "It is really just that oversight of the safe and secure facilitation of commerce, the ability for commerce to transport on U.S. waters." At the strategic-level, S2 specified that "we basically have thoroughly covered our oversight of the commercial activity to make sure they were in compliance with all the applicable laws, regulations, policies, etc." S1 stated, "I think the mission is to facilitate compliance, to facilitate to commerce, educate our customers, and prevent marine casualties and pollution." At the tactical-level, T6 stated, "At the end of the day, like I said, the passengers and the cargo gets there, where it is supposed to, on time and safely." T1 expected variance in responses to question 2 with regard to the marine inspector's mission: "You are going to get many different answers on this one." T4 clarified that "the primary mission is for safety of the mariners, [and] safety of the public." T3 pointed out in response to question 1, "So, it all comes down to qualifications, honestly." The U.S. Coast Guard (2015) Junior Officer Prevention Ashore Career Guide further supported T3's claim by stressing the attainment of qualifications to

support career progression. Therefore, the mission of marine inspection appeared ambiguous and unclear, according to the participant responses and my review of documentation.

Theme 2: Provision of Information Sources for Marine Inspection

The participants in this study were asked about performance support components for the U.S. Coast Guard MIP. One of the components was information needed to conduct marine inspections, and all of the participants discussed the sources of information required. The participants referred to federal regulations, organizational policies, guidance, and job aids. All of the participants affirmed that the information marine inspectors need to complete their jobs is not provided in one source. For example, the U.S. Coast Guard publishes navigation and vessel inspection circulars (NVIC) as guidance for the maritime industry and marine inspectors. There are over 200 NVICs, ranging from several pages to hundreds of pages that cover specific inspection topics. NVICs exist in a different repository from other sources of marine inspection information. U.S. Coast Guard MIP policy managers also maintain four volumes of the Marine Safety Manual for marine inspection policy, which contain 2,226 pages. Further, the volumes reference thousands of information sources relevant to marine inspection. Table 3 lists a sample of these information sources. The marine safety manual includes this directive as well:

> It is neither necessary nor possible to memorize the multitude of laws and regulations that the U.S. Coast Guard must enforce. However, it is incumbent upon, and the responsibility of, the marine inspector to have a working knowledge

> of both U.S. and international laws and regulations so that he/she can recognize a deficiency when one occurs and can quickly locate the statutory citation related to a particular requirement. (U.S. Coast Guard Marine Safety Manual Volume II, 2015, p. 23)

Thus, the expectation for marine inspectors is that they retain the information needed to complete their jobs on their own. This directive appears at odds with the performance support component of information in Gilbert's (2013) behavior engineering model, and Fusch and Gillespie's (2012) human competence model. S3 clarified the theme regarding various information sources:

> The marine safety manual, the regulations, the code, and then any policy letters ... then of course there is also direction via e-mail, mass e-mail, that sometimes come out, obviously not the best. Districts, certain districts have their policy, or work instructions. Then even some units, if you are a marine inspector working for a chief of inspections division (CID), he can have CID notes that you are supposed to follow.

P1 explained, "Well, [marine inspectors] get [information] from a variety of sources." Concerning how information is provided to marine inspectors in some tactical-level units, T5 stated, "(a) You just simply do not get that information [needed to conduct an inspection] or (b) you have someone say hey ... you are going to be going out on this boat ... do the research and figure out what they need." Based on the participant responses and document review, marine inspectors may have limited information management

resources. Table 3 contains a nonexhaustive list of information sources needed for marine inspectors to conduct their work.

Table 3

Nonexhaustive Sample List of Information Sources for Marine Inspection

Marine Safety Manual Volume I
Marine Safety Manual Volume II
Marine Safety Manual Volume III
Navigation and Vessel Inspection Circulars
U.S. Coast Guard Policy Letters
U.S. Coast Guard Internal Messages
Local U.S. Coast Guard MIP unit policy letters
Marine Information for Safety and Law Enforcement Database (vessel records)
46 Code of Federal Regulations Parts 1–199
33 Code of Federal Regulation Part 19, 80, 105, 140–147, 151–159, and 160
49 Code of Federal Regulations Parts 171–179
U.S. Code Titles 33, 46, and 50
International Convention for the Safety of Life at Sea (SOLAS) and all amendments and codes
International Convention on Load Line (ICLL), all amendments
International Convention for the Prevention of Pollution from Ships (MARPOL) and all amendments
International Regulations for Preventing Collisions at Sea, 1972 (COLREGS)
International Convention for Safe Containers, 1972
International Convention on Standards of Training, Certification, and Watch-keeping for Seafarers, 1978, and all amendments
International Labor Organization Convention No. 147
A Guide to the Non-Destructive Testing of Non-Butt Welds in Commercial Ships, Parts I and II, Ship Structure Committee (SSC)
A Guide to Sound Ship Structures, D'Archangelo
American National Standards Institute (ANSI) Steel Pipe Flanges and Flanged Fittings, ANSI B.16.5, American Society for Testing and Materials (ASTM)
ANSI Standard for Steel Valves, ANSI B.16.34, ASTM
ANSI Standards for Power Piping, ANSI B.31.1, ASTM
Approved Welding Electrodes, Wire-Flux and Wire Gas Combinations, American Bureau of Shipping (ABS)
ASME Boiler and Pressure Vessel Code, The American Society of Mechanical Engineers (ASME)
Eight specific ASTM Standards

(*table continues*)

Boilerworker First and Chief, Bureau of Naval Personnel (NAVPERS) 10537, U.S. Navy
Carbon Dioxide Extinguishing Systems, NFPA-12, National Fire Protection Association (NFPA)
Care of Fire Hose, NFPA-198, NFPA
Code of Safety for Dynamically Supported Craft, IMO
Code for the Construction and Equipment of Mobile Offshore Drilling Units (MODU Code), IMO Resolution A.414(XI)
Code of Safety for Diving Systems, IMO
Code of Safety for Special Purpose Ships, IMO Resolution A.534(13)
Considerations for the Prevention of Furnace Explosions and Superheater Damage in Merchant Ship Boilers During Light-Offs, T&R R-23, the Society of Naval Architects and Marine Engineers (SNAME)
Control of Gas Hazards on Vessels to be Repaired, NFPA-306, NFPA
Dangerous Properties of Industrial Materials, Sax
Defects and Failures in Pressure Vessels and Piping, Helmut Thielsch. Reinhold Publishing Corp., New York
Dry Chemical Extinguishing Systems, NFPA-17, NFPA
Engineering Materials Handbook, Mantell. McGraw-Hill Book Co., New York
Fiberglass Boat Design and Construction, Scott and DeGraff
Fiberglass Boats, DuPlessis and DeGraff
Fire Hose Coupling Screw Threads, NFPA-194, NFPA
Fire Protection of Vessels During Construction, Repair and Lay-Up, NFPA-312, NFPA
Flammable Liquids Code, NFPA-30, NFPA
Flash Point Index of Trade Name Liquids, NFPA-325A, NFPA
Foam Extinguishing Systems, NFPA-11, NFPA
General Information for Grain Loading, International Cargo Gear Bureau, Inc.
Guide for Construction of Shipboard Elevators, ABS
Guide for Container Equipment Inspection, Institute of International Container Lessors, Ltd.
Guide for Inert Gas Installations on Vessels Carrying Oil in Bulk, ABS
Guide for Repair, Welding, Cladding and Straightening of Tail Shafts, ABS
Guide for Centralized Control and Automation of Ship's Steam Propulsion Plant, T&R R3-23, SNAME
Guide for Shipboard Centralized Control and Automation, ABS
Guide for Steel Hull Welding, American Welding Society (AWS)
Guide for Underwater Inspection in Lieu of Drydocking Survey, ABS
Guidelines for the Design and Construction of Offshore Supply Vessels
Halon 1301, National Fire Prevention Association, NFPA-12A, NFPA (1987)
Handbook of Ship Calculations, Construction and Operation, Hughes

(*table continues*)

Handbook of Test Methods and Practices, Naval Ship Systems Command (NAVSHIPS) 918828, U.S. Navy
Handbook of Wooden Boat Construction, ChapelleHandbook on Sanitation of Vessel Construction, PHS No. 393, U.S. Public Health Service (USPHS)
Handbook on Sanitation of Vessels in Operation, PHS No. 68, USPHS
Inert Gas Systems, IMO Publication, 1983 Edition, Reprinted 1987
Inspection Manual, NFPA
International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk (IBC Code). The IBC Code is mandatory under both Chapter VII of SOLAS and Annex II of MARPOL 73/78 for chemical tankers constructed on or after 1 July 1986
International Gas Carrier (IGC) Code. The IGC Code is mandatory under Chapter VII of SOLAS for gas carriers constructed after 1 July 1986
Bulk Chemical (BCH) Code. The BCH Code is mandatory under Annex II of MARPOL 73/78 for chemical tankers constructed before 1 July 1986
International Convention for Safe Containers, IMO
International Safety Guide for Oil Tankers and Terminals (ISGOTT), 3rd Edition, International Chamber of Shipping
Introduction to Steel Shipbuilding, Baker
Lloyd’s Register of Shipping Rules and Regulations for the Classification of Yachts and Small Craft (Lloyd's Rules)
Manual of Safe Practices in Offshore Operations, Offshore Operations Committee

Theme 3: Individual Information and Knowledge Management Systems

When employees need certain information to complete a job but are not given that information, their performance typically declines (Gilbert, 2013). Employees often perform well when given all the information and knowledge they need to successfully complete their work (Hsu, 2014). All of the participants related that marine inspectors should apply regulations accurately to inspected vessels. However, they clarified that individual marine inspectors must filter relevant information sources to apply requirements accurately to certain vessels. Marine inspectors receive general guides for certain vessel types. P2 explained, “So ... we give them a checkbook, CG-840 series book, a guideline, so people will know in general what systems they may need to look at”

However, T4 referenced the following in regard to the general inspection guides: “There may be only 20–30% of that [general inspection guide] that is applicable to the inspection that I am doing.” Thus, each marine inspector may often have to amass and formulate the information needed to conduct each individual marine inspection without the provision of all the pertinent information concerning each marine inspection.

All participants stated that the quality of an inspection was essential to marine inspector performance. However, in the document review, I found no definition of a quality inspection, or quality standard for specific vessel types other than the general CG-840 books. According to the participants’ perceptions, an individual marine inspector must sort through the relevant sources of information and then apply requirements accurately to each vessel they inspect. Ultimately, a marine inspector may have to develop a personal library of information and then create an individualized process to apply that information to any given vessel. In summary, marine inspectors appear to use their personal judgment regarding what defines a quality or comprehensive inspection. T1 stated this regarding how a marine inspector determines the scope of an inspection, “So I think you have to go through the 840 book [general inspection guide] prior to doing the inspection, you know, and looking at the vessel critical profile, and the certificate of inspection of the vessel to ensure what stuff is going to apply and what stuff is not going to apply during your inspection.” S2 clarified how to achieve a quality inspection: “It is up to the judgment of the individual marine inspector, that the inspector is satisfied with the condition of the vessel.” P2 said that marine inspector judgment is up to the individual marine inspector, “And it is really the balance for any marine inspector is what

level of detail is necessary ... because level of detail at which they can do those examinations is sort of individual." Further supporting this theme, the Marine Safety Manual Volume II (2015) includes this statement:

> The marine inspector is bound to encounter situations in which regulations that seem applicable are actually inappropriate for the situation or not in the best interest of overall safety. During the inspection of a vessel, an inspector must take care to ensure that each regulation being applied is relevant to the vessel and situation. Inspectors should be alert to such situations. (p. 41)

Thus, the participant data and document review represent a perceived expectation for marine inspectors that they develop individual information management systems.

Theme 4: Qualification Leads to Promotion

All participants related that the main incentive for marine inspectors was promotion or advancement within the U.S. Coast Guard, and all perceived that achieving qualifications supported promotion and career advancement. P3 explained, "The more qualifications, the more knowledgeable you are, especially sooner in your career, that opens up more job opportunities than someone else who is not as aggressive." P1 stated, "I would say the main incentive is advancement." T5 provided this insight:

> Getting the right location is kind of key to succeeding in the long run ... you want to go somewhere where they are going to be able to give you more qualifications ... to help you progress in your career.

Even further, CG-543 Policy Letter 11-08, dated September 1, 2011, stated that civilian apprentice marine inspectors must attain a certain number of qualifications for promotion

to the next General Schedule grade. A 2015 career guide for junior officers stated that "being a marine inspector is the cornerstone for all Prevention [Directorate] officers" (p.18). The guide also included this statement: "Officers should obtain as many competencies [qualifications] as possible" (p. 18).

Other than promotion, participants knew of few formal incentives in the program. Participants referenced incentives that ranged from verbal recognition to none at all. P1 referred to credibility with peers as an incentive, based on how many qualifications a marine inspector attained. T4 stated, "I do not think there is, I do not think there is a whole lot of incentive." S2 discussed that, at a certain level, marine inspectors lose promotion ability remaining as just marine inspectors, and must move to a different career path. Supporting S2's thoughts was an internal U.S. Coast Guard strategic needs assessment of all marine inspectors (USCG, 2012). One respondent in the marine inspector strategic needs assessment explained that the marine inspector career path plateaus at a certain organizational level. Further, participants did not refer to a formal incentive system specific to marine inspection. The only MIP-specific formal incentive I discovered in the document review was a marine-inspector-of-the-year award given to one inspector (in the entire U.S. Coast Guard). Interestingly, seven of the participants described one incentive as personal marketability outside the U.S. Coast Guard, based on qualification attainment. According to S3, "if you are looking for a job outside the U.S. Coast Guard, the more qualifications you have the better; that would be an incentive for future employment." Table 4 summarizes the participant perceptions concerning incentives for marine inspectors.

Table 4

Perceptions Regarding Incentives for Marine Inspectors

Coded themes	No. of participants who offered this perception	% of participants who offered this perception
Advancement through qualification attainment	13	100
Marketability outside the U.S. Coast Guard	7	54
Credibility	2	15

Theme 5: Differences in Skills and Knowledge Management

A key tenet of the equity theory of motivation is that when employees perceive inequity in the workplace, their behavior will often reflect reduced motivation to perform (Souza, 2014). Consistent and equitable training is essential in engineering superior performance (Giauque et al., 2013; Souza, 2014). The participants in this study all indicated differences in marine inspector training according to their job location. The U.S. Coast Guard has approximately 52 units that oversee marine inspections, and each has a distinct training program. The participants stated that marine inspector training generally follows a set process of (a) attending the marine inspection course (MIC), (b) having designated verifying officers sign task items in their relevant personnel qualification standard (PQS) for any given qualification, (c) completing a verification inspection for that qualification with a qualified inspector, and (d) passing an oral qualification board exam given by at least three qualified inspectors. The marine inspector then receives designation as a qualified inspector.

Participants perceived inconsistencies in the qualification process. T3 explained that a marine inspector's performance is based on the training received at any given port at which the inspector is stationed: "It all depends on the ports we go to." P4 affirmed, "the consistency is not there ... not every unit does a check ride [verification inspection]." Attendance at the MIC is required to qualify as a U.S. marine inspector. However, although I am a marine inspector, I did not attend the MIC, as my unit command decided that a less experienced inspector should go instead, thus waiving my requirement to attend. Moreover, only designated verifying officers may sign off PQS task items. However, the U.S. Coast Guard Policy Letter governing the designation process has established vague requirements for verifying officers. When asked if there were requirements regarding the designation of inspectors as verifying officers, S2 stated, "No there is not." The policy letter contains the following definition of a verifying officer:

> An experienced marine inspector designated by the Officer in Charge of Marine Inspection who has demonstrated the ability to instruct and verify a candidate for their ability to correctly perform the task in the applicable PQS workbook. The verifying officers (VO) are the only personnel authorized to sign off PQS tasks and must be certified in the competency [qualification] for the PQS workbook they are endorsing. (CG-543 Policy Letter 09-04 CH1, 2009, p. 2)

The designation of verifying officers is at the discretion of unit command personnel, although in 2015, an internal U.S. Coast Guard auditor found that command personnel did not ensure that verifying officers fulfilled their duties in a consistent and correct

manner. The qualification process is a component that supports marine inspector competence. However, differences in the qualification processes appear to exist.

Also noted in the study was further skills and knowledge management inequity. There are courses beyond the MIC that marine inspectors may attend; however, not all are given the opportunity to do so. P4 explained that "certain units are able to maximize and benefit from these courses more than others." T4 stated, "But, you know, the additional training is really left up to the unit and individual to seek out, a lot of schools, it is kind of word of mouth." The Marine Safety Manual Volume I (2015) includes this explanation:

> Much of the responsibility for the administration of the training program rests with the trainee. The trainee maintains his or her own on-the-job (OJT) manual [aka PQS] and records, and ensures that they are kept current and up to date. Each trainee is expected to take the initiative in requesting specialized training, in completing various sections of the OJT manual [aka PQS] thoroughly and expeditiously, and in submitting completed sections of the manual to his or her training officer or coordinator for review and further action. (p. 252)

Further, the Marine Safety Manual Volume I states, "trainees may receive training in several optional areas of designation, depending upon the workload demands of the unit" (p. 247).

The potential for additional differences may exist when marine inspectors transfer between units. When transferred to a new unit, inspectors are required to attest to their knowledge and competence with a recertification board for each qualification they hold.

Recertification is required in CG-543 Policy Letter 09-04 CH1, yet I was unable to locate standards required for this requalification requirement. Two participants referenced an inspector performance assessment tool; the tool is a subjective assessment based on a verifying officer's opinion vis-à-vis a set of requirements. I found no required tests, requalification exams, or other knowledge maintenance tools in the document review or interviews. T2 stated, "I got my qualification at my unit, but if I go down to Louisiana, I am sure their barge standards and what they see down there is way different than what I have seen."

Finally, there is an expectation for marine inspectors to maintain their skills and knowledge. The CG-543 Policy Letter 09-04 CH1 requires marine inspectors to complete one inspection annually using each specific qualification they hold, but I found no tool that monitors this requirement for each marine inspector. A tool exists for other U.S. Coast Guard qualifications in the Prevention Directorate. The supporting data for tracking this requirement is managed manually. The U.S. Coast Guard internal auditor staff noted that only 60.7% of units monitor whether or not marine inspectors met the annual requirement from 2014 to 2015. P4 stated, "There is no general report on currency, not that I know of." I used the U.S. Coast Guard Business Intelligence software and found that on September 9, 2015, only 60% of marine inspectors in active inspection jobs were manually marked as current in a qualification (i.e., certified that the inspector had completed an applicable inspection in the past year).

In summary, all participants perceived that there are differences regarding management of marine inspectors' skills and knowledge. As examples, I found unclear

requirements for designating verifying officers in CG-543 Policy Letter 09-04 CH1 and could not locate a U.S Coast Guard standard level of competence to maintain each marine inspector qualification. Such assessment is required each time an inspector transfers to a new location. Further, a U.S. Coast Guard Business Intelligence report indicated that nearly 40% of active marine inspector qualifications were not recorded as current, as of September 9, 2015. In addition, the participants perceived that marine inspectors receive varying training and professional development opportunities based on their job locations and chain of command. As T5 indicated, “It is going to depend on the port, it is going to depend on the quality of your own [unit] training program.” Finally, I did not find a tool, similar to other U.S. Coast Guard qualification monitoring tools, that monitors individual marine inspector competence and qualification status.

Theme 6: Nonstandard Selection Criteria for Marine Inspector Positions

Stating and using selection criteria or prerequisites for a job are standard practices within many organizations (Ekuma, 2012). Ekuma (2012) stated that effective selection methods might minimize employee turnover and poor performance. Ekuma also concluded that determining employees’ qualifications for a job position should be a human resource manager’s number one priority. Ekuma referenced *predictive validity* as a key term for human resource managers. Predictive validity relates to how well a human resource manager can reasonably predict employees’ performance according to the degree to which they fulfill position requirements that promote suitable future performance (Ekuma, 2012). When predictive validity is absent from the employee selection process, organizational leaders may have a difficult time understanding

employee retention problems (Ekuma, 2012). None of the participants in this study knew of standard selection prerequisites for a U.S. Coast Guard marine inspector. In the document review, I found an internal memorandum published by a Prevention Directorate office, composed by expert marine inspectors, dated September 12, 2014. The memorandum included concerns regarding turnover of marine inspectors within the U.S. Coast Guard MIP. The memorandum also included a recommended list of new metrics needed to monitor the selection of marine inspectors. In summary, without well-defined predictive validity and selection requirements in the marine inspector selection process, U.S. Coast Guard leaders appear to often find limited success in the selection process.

Miles and Sadler-Smith (2014) discussed human resource managers' use of objective and subjective employee selection practices. Human resource managers often use a combination of an objective method (i.e., a test) and social interaction (i.e., an interview) in selecting employees for an internal position (Miles & Sadler-Smith, 2014). As per the U.S. Coast Guard accession manuals, a person entering the U.S. Coast Guard for the first time must complete an accession interview; however, when transitioning within the U.S. Coast Guard to a marine inspector position, no interview or test is required. T6 explained:

> You should be interviewed specifically for that job. I also believe that the time, money, and effort that is put into us, it is very frustrating to train a guy for four years, and then he decides he wants to get out.

P4, a human resource administrator, stated:

> [There are] no prerequisites to be a marine inspector. If they have the time to build the requisite experience, we give them that opportunity, if they have been in another field, and performing in that field, you just have to be a specialist by a certain time.

T5 summarized, “There is not a lot of selection process that goes into it, that is why you get such a wide variety of skill sets.”

Theme 7: Positive Job Perception vs. Competing Demands

All participants provided positive perceptions regarding their experience as a marine inspector. The participants described the pride they derived from completing marine inspections. Muo (2013) and Giaque, Anderfuhren-Biget, and Varone (2013) discussed two key factors in managing human capital: (a) ensuring worker commitment to the organization, and (b) providing the worker the capability to perform well. The participants’ perceptions concerning marine inspection activities depicted personal motives for working as a marine inspector in the U.S. Coast Guard MIP. T3 stated, “[It] encompasses just how we should all be out on the water, with the condition of our vessels ... I think it is a great program.” P2 explained personal motives for being a marine inspector: “to make a valuable contribution to society by saving life and property at sea.” S1 stated, “Well first it interests me. I think it adds value to the marine transportation system, it is an important job.” T2 described it thus:

> Being in inspections, and seeing the type of casualties you can prevent, it is very rewarding, in a sense just knowing that you can prevent those search and rescue cases, and prevent those big casualties.

However, U.S. Coast Guard leadership promotes broad experiences, not just those in marine inspection.

Seventy-seven percent of the participants referenced competing demands for marine inspectors that detracted from their primary job. P1 explained, “you have a marine inspector that has to achieve a machinery qualification and they are also the chair of the leadership and diversity advisory council, there is a competing demand right there. It is a tug of war for them.” P3 stated, “Once you become a marine inspector, there is the expectation that you diversify.” S1 clarified, saying “competing demands I think can be a barrier on a junior officer, or on someone who is in a marine inspection billet.” T1 stated, “Not every marine inspector can be just a marine inspector, he has collateral duties, he has special projects ... whatever the hot topic of the day is.”

Applications to Professional Practice

Through the lens of the human competence model (Fusch & Gillespie, 2012), the findings in this study reveal that some U.S. Coast Guard marine inspectors, to varying degrees, may need (a) clarity regarding their mission, (b) improved management of information and knowledge, (c) consistent and equitable skills and knowledge management processes, (d) attainable incentives, and (e) standard selection criteria. Nonetheless, the study findings indicate that participants held a positive perception of their jobs. The findings relate to all of the components in Fusch and Gillespie’s (2012) human competence model. The findings concerning mission clarity, information management, and incentives relate directly to the environmental support category, while those with respect to skills and knowledge management, training, and personal motives

are relevant to the worker behavior category. The following addresses the practical application of the study findings and their connection to concepts of performance management. The findings and recommendations from this case study may help U.S. Coast Guard MIP leaders improve performance through the use of performance management principles.

Mission Clarity

Mission clarity within organizations is critical, and the study findings appear to relate to Walker et al.'s (2010) and Jung's (2014a, 2014b, 2014c) claim regarding the prevalence of goal ambiguity found in public organizations. In a study of federal agencies, Ayers (2015) discovered that, from an employee's perspective, alignment between goals and the relevant organizational mission improved organizational performance. Ayers also found that the U.S. Government Accountability Office advocated the need for a well-defined sightline from employee performance outcomes to organizational outcomes. Gilbert (2013) developed the ACORN model to provide a way for leaders to clarify the missions of an organization or its components. ACORN refers to *accomplishment, control, overall objective, reconciliation,* and *numbers,* and all five components are required in accordance with Gilbert's work. A mission must be an accomplishment. The mission must be under the direct control of the performer. A mission has to be the overall objective of the given organization or component. A mission must reconcile with those in upstream and downstream organizational components. Finally, a mission must be measurable with performance metrics or numbers. U.S. Coast

Guard leaders may benefit from using Gilbert's ACORN model in clarifying the marine inspector mission.

I believe the ACORN model could clarify one mission that participants articulated—providing quality, timely, and well-communicated marine inspections. The mission is an accomplishment supported by inspection reports. The mission is under the direct control of a marine inspector. U.S. Coast Guard leaders could establish that the overall objective of marine inspection is to provide high quality, timely, and well-communicated inspections. This mission reconciles with the others presented in Table 2. Conclusively, U.S. Coast Guard leaders could develop a performance metric to assess marine inspections with respect to an established quality standard.

Information Management

Based on the participant perceptions and responses, as well as the document review, the U.S. Coast Guard MIP could benefit from improved information management. According to the human competence model, the environmental support of information is a worthy investment for any organization (Fusch & Gillespie, 2012). Muo (2013) found that organizational leaders who gave necessary information and knowledge to their employees saw employee motivation increase. Karavardar (2014) explained that when organizational leaders provided information to all performers in an organization equitably and seamlessly, the corresponding knowledge management of the organization promoted exemplary performance. When organizational leaders withhold information that is needed to complete work, or certain performers know how to retrieve the information and others do not, employee motivation for those employees who do not

receive the information will likely decrease and work performance may suffer (Karavardar, 2014). Expedient knowledge management and provision of information are the workplace future for knowledge workers (Muo, 2013). Ozer et al. (2014) discovered that effective information management is associated positively with organizational performance. Based on the participant perceptions and document review, U.S. Coast Guard leaders should work to improve information management for marine inspectors. Maritime industry leaders and their governing entities may benefit from effective information management.

Skills and Knowledge Management

Jain (2014) found that specific training is critical when an employee is selected for a new position within an organization. U.S. Coast Guard marine inspectors are often not trained for their positions before they report to those positions. In some cases, before they are assigned to their first marine inspector positions, U.S. Coast Guard members receive no training for those positions. Also, marine inspectors receive mainly on-the-job training. Moreover, according to the perceptions of the study participants, marine inspectors may receive training opportunities inadequate to building a repertoire in marine inspection competence or skills. Jain found that when employees do not receive appropriate training before beginning a new position, organizational leaders can expect decreased or poor productivity, performance, knowledge and skill sets, and utilization of resources. Additionally, the leaders should expect an increase in job changes and the need for added supervision and control (Jain, 2014). Marine inspectors' perceived lack of

confidence (USCG, 2012) in dealing with maritime industry personnel may come from differences in, and the belated training of, newly selected inspectors.

Incentives

The valence component of the expectancy theory appears relevant when addressing incentives for marine inspectors. Participants referenced career advancement as marine inspectors' main incentive. However, a formal recognition system with a realistically achievable benchmark may further elevate inspector performance. Incentives are a critical factor for knowledge workers, who are akin to marine inspectors. Based on a case study of 207 knowledge workers from several industries in Sri Lanka, Atapattu and Jayakody (2013) found that recognition of exemplary work is key when rewarding knowledge workers. Organizational leaders within the MIP could tie the proposed formal recognition with advancement to bolster valence and expectancy.

Employee Selection

The U.S. Coast Guard MIP selection process for marine inspectors may benefit from the use of the following best practices and the establishment of requirements for the selection of inspectors. Graybill, Carpenter, Offord, Piorun, and Shaffer (2013) researched exemplary selection programs for employees and found the following best practices: (a) use of policies and requirements, (b) wide dissemination of those policies and requirements, (c) checklists for all levels relevant to the selection process, and (d) distinctive activities relevant to singular institutions. The selection of the right employees is often paramount in knowledge work (Atapattu & Jayakody, 2013). No participant knew of selection criteria for marine inspectors, and T5, T6, and P4 perceived gaps in the

selection process. U.S. Coast Guard leaders should review the selection process of marine inspectors.

Using the Human Competence Model

In this study, I used the human competence model as my lens and found potential performance support gaps in the U.S. Coast Guard MIP. For an organization to run effectively, performance expectations should be clear to all employees (Joaquin & Park, 2013). Organizational leaders have an obligation to ensure that appropriate environmental supports are in place for employees (Fusch & Gillespie, 2012). These supports should include effective performance feedback and requirements, information needed to complete the job, resources, job aids, and extrinsic incentives such as formal recognition (Gilbert, 2013). Moreover, leaders need to provide their employees with adequate skills and knowledge management (Muo, 2013). The human competence model allowed me to depict possible performance support gaps in a federal agency. Thus, this study presents an example of how to use the human competence model to explore strategies to improve performance.

Implications for Social Change

Ninety percent of the world's cargo travels by sea to reach consumers, and the world marine transportation system connects to the U.S. maritime industry (Cordeau et al., 2015). An economic multiplier of 2.0 was found within the U.S. maritime industry (Jacobsen, Lester, & Halpern, 2014), which indicates that for every completed maritime industry economic activity, an equivalent economic activity is created in another industry (Jacobsen et al., 2014). Marine inspectors are a critical component of safety in the U.S.

maritime industry (USCG, 2011), which is an essential component of the larger economy (Jacobsen et al., 2014). However, in 2012, U.S. Coast Guard analysts found that 41% of marine inspectors were not confident in dealing with maritime industry personnel in their daily jobs (USCG, 2012).

According to the perceptions of the study participants, marine inspectors desire appropriate environmental and behavioral supports to conduct their jobs effectively. Such supports could bolster their confidence in executing their jobs. The next section provides recommended performance improvement strategies. I present these strategies as possible ways for U.S. Coast Guard leaders to improve the service of marine inspection. Doing so could enhance the safety and security of people and property on U.S. navigable waterways. When inspectors perform well, their accomplishments could have direct effects on millions of people who work on, use, and live by the navigable waterways of the United States.

From a holistic perspective, I provided a framework grounded in the literature review and relevant to the U.S. Coast Guard MIP that may benefit other federal and government agencies. Walker et al. (2010) reviewed public organizations around the globe and found that goal ambiguity was a clear problem. The research I did appears to have revealed a similar issue in the U.S. Coast Guard MIP. Ayers (2015) noted that goal alignment and mission clarity are essential for organizations' maintaining exemplary performance. Improving the clarity required in government and federal agency missions and accomplishments may bolster corresponding citizen appreciation and trust (Ayers, 2015). The U.S. Coast Guard MIP could lead the way in a performance management

revolution by connecting objectives from tactical-level operations to policy-level processes. In essence, U.S. Coast Guard leaders would thus set an example regarding how federal agencies might implement performance management concepts successfully.

Recommendations for Action

The findings from this study reinforced and complemented other studies regarding performance management concepts and business practices. However, the context of this study provided new insights from the perspective of a federal agency program, specifically the U.S. Coast Guard MIP. The findings of this study and the recommended performance improvement strategies will be included in professional conference presentations and discussions within professional seminars. Furthermore, because other government agencies may have similar issues, I may present the study findings in academic journals and government agency and marine industry publications.

Performance Improvement Strategy 1: Mission Clarity

On the basis of perceptions of the study participants and my review of MIP documentation, I recommend that U.S. Coast Guard MIP leaders clarify and promulgate widely a mission for marine inspection. The participants in this study perceived an unclear picture regarding their mission. O'Boyle and Hassan (2013) found that employee performance declines when organizational stakeholders perceive conflicting objectives and missions.

Shahmehr, Safari, Jamshidi, and Yaghoobi (2014) asserted that leaders who establish an appropriate mission, with associated goal setting, lead organizations toward improved performance. An organizational mission statement, organizational

performance, and individual performance are interconnected (Shahmehr et al., 2014). When an organization's mission is vague, leaders may have difficulty supporting organizational success and, according to Aziz and Fady (2013), organizational leaders who do not have developed missions are frequently ineffective. Furthermore, the ambiguity of participants' perceptions regarding performance in the U.S. Coast Guard MIP relates to the expectancy theory of motivation. Depending upon their perception of the mission, they may not believe that they have the individual ability to complete the mission.

Performance Improvement Strategy 2: Information Resource Repository

On the basis of participant perceptions and my review of documents, I recommend that U.S. Coast Guard MIP leaders work to ensure uniform, consistent, and transparent provision and availability of essential knowledge and information management resources for all marine inspectors. I also recommend establishing one repository for marine inspector information sources. The recommendation is consistent with one from representatives of the International Maritime Organization who found a similar issue in the global maritime industry and recommended an international repository of maritime regulatory information (International Maritime Organization [IMO], 2015).

Hsu (2014) found that organizational performance improved when employees receive the information they require to conduct their jobs. Organizational managers use knowledge management practices effectively when they derive the most from information resources (Hsu, 2014). The voluminous amount of information needed to

conduct the marine inspector job is evidence that improvement in knowledge and information management practices could benefit the U.S. Coast Guard MIP. Participants perceived inadequate or varying provision of information sources. S3 reported the use of external information sources (i.e., marine consulting-firm newsletters) to obtain critical information and knowledge. Also, adequate provision of information resources connects directly to Fusch and Gillespie's (2012) environmental support component of information.

Performance Improvement Strategy 3: Knowledge and Information Management Tool

I recommend that U.S. Coast Guard MIP leaders designate a team to develop a knowledge and information management tool that provides applicable and relevant information (i.e., requirements) to marine inspectors. The tool would constitute a holistic system that would eliminate the cyclical nature of individual marine inspectors creating their own knowledge and information management systems. Marine inspector performance may improve if a tool exists that provides each inspector with the information and knowledge applicable to each vessel they inspect at any given time. Fusch and Gillespie's (2012) environmental support components of information and tools relate to this recommendation. Shu-Mei and Pei-Shan (2014) discovered that an increase in an organization's capacity to apply knowledge and information enhanced organizational performance. Further, they found that a knowledge and information system that is dynamic and current promotes improved performance.

Manohar (2013) claimed that information management would be an essential factor in achieving organizational success over the next several years. Leaders who develop an effective knowledge and information management system should improve their organization's performance (Manohar, 2013). According to the study findings, U.S. Coast Guard MIP leaders may be relying on individual marine inspectors to develop their own knowledge and information management systems. My document review revealed that the MIC and portions of the PQS books address how marine inspectors may apply regulations. However, the applicability of regulations is a combination of knowledge and information that U.S. Coast Guard leaders could maintain and provide to marine inspectors. Manohar found that knowledge and information must be communal and exist as a basis for collaboration. When organizational employees do not share a holistic knowledge and information management system, or do not use the system as a basis for collaboration, information is often meaningless or even detrimental to the organization (Manohar, 2013).

Performance Improvement Strategy 4: Attainable Incentives

Minimum performance requirements for career advancement. On the basis of the document review and the participants' perceptions, I recommend that U.S. Coast Guard leaders clarify the minimum performance requirements for marine inspectors, active duty and civilian, to be competitive for career advancement at various organizational levels. The study findings revealed career advancement as the primary incentive in the MIP; however, the reviewed documents do not show clear performance requirements for advancement. A lack of connection between an incentive and an ability

to attain that incentive reduces an employee's motivation according to the expectancy theory of motivation and Herzberg's motivation-hygiene theory (Chyung & Vachon, 2013; Renko et al., 2012). The expectancy theory of motivation's component of instrumentality (Renko et al., 2012) refers to performers' belief that an organization will reward their performance when they meet performance requirements. Herzberg's theory also includes a motivation factor concerning job enrichment and career advancement (Chyung & Vachon, 2013). When performers perceive that the opportunity for career advancement is limited, their motivation may decrease.

Formal recognition. Using the expectancy theory lens (Renko et al., 2012) in conjunction with the human competence model environmental supports (Fusch & Gillespie, 2012) and, on the basis of the study findings, I recommend the creation of an award for excellence in marine inspection. U.S. Coast Guard leaders could bestow the award to any number of marine inspectors in any given time frame on the basis of objective performance criteria. The award should contain performance criteria that are specific, measurable, achievable, realistic, and time-bound, so that the award is attainable by any marine inspector. U.S. Coast Guard leaders may thus improve marine inspector motivation via an increase in instrumentality with an attainable, desirable, and formal organizational award.

Lack of a formal, program-level recognition system was a deficiency noted in the participants' responses and my document review. Participants referenced an evaluation system, verbal recognition, and awards from their local unit. However, I found no formal program-level recognition system within the U.S. Coast Guard MIP specific to marine

inspection, other than an annual marine inspector award. Only one marine inspector receives recognition nationally within the U.S. Coast Guard MIP each year, through this award. Assuming an inspector wishes to receive it, this award meets the valence component of the expectancy theory of motivation. However, the likelihood that an inspector will receive the award is minimal, reducing the instrumentality, thus effectiveness, of the award, since only one out of hundreds will receive the award each year.

Marine inspectors are knowledge workers, who use their minds to provide a service rather than physically producing a product. Formal recognition often motivates knowledge workers (Muo, 2013). Rahman et al. (2013) found that retention and productivity increase with effective employee motivation. Rahman et al.'s (2013) findings support Fusch and Gillespie's (2012) environmental support component of incentives. Tilekar and Pachpande (2014) presented similar conclusions based on Herzberg's motivation-hygiene theory. These authors stated that a supportive work environment, compensation structure, equitable pay, career advancement, sound company policies, and work recognition play pivotal roles in providing incentives to employees. Similarly, Quratulain and Khan (2015) found that a lack of robust material incentives in public organizations makes it challenging for managers to maintain their employees' motivation.

Performance Improvement Strategy 5: Consistent Training, Skills, and Knowledge Management

I recommend that U.S. Coast Guard leaders ensure a standardized framework for tracking marine inspector skills and offering knowledge management and training. More specifically, I recommend the following: (a) provision of equal opportunity for all marine inspectors to attend professional and career advancement training, seminars, or conferences; (b) an automated tool to monitor individual marine inspector currency; (c) clarity regarding requirements for designation of verifying officers, and (d) explanation of the competency verification requirements for marine inspectors when they requalify or transfer to a new unit. As noted in Theme 4, qualification attainment appears to lead to promotion for marine inspectors. However, marine inspectors do not appear to have control over qualification attainment, because of perceived differences in skills and knowledge management and training opportunities within the MIP. Performers should have control over their performance or their motivation will likely decrease (Gilbert, 2013).

The expectancy theory of motivation's component of expectancy refers to performers' perceptions that they have the ability to perform at an expected level (Renko et al., 2012). When performers' expectancy is zero they frequently will not be motivated to perform the job (Fagbohungbe, 2012; Renko et al., 2012). Therefore, inspectors potentially do not have complete control over the performance metric by which U.S. Coast Guard leaders assess them.

Performance Improvement Strategy 6: Selection Criteria

I recommend that U.S. Coast Guard leaders develop and then disseminate selection criteria for marine inspectors, more specifically, criteria for person-to-job fit or a verification process for marine inspector jobs. From my review of participants' perceptions and MIP documentation, I have found that standard selection requirements ensuring that employees fit their jobs as marine inspectors may not exist or are not widely known.

The congruence between people and their jobs is a critical factor that motivates employees to deliver exemplary performance (Dasgupta et al., 2014). A person's background, experiences, motivation, characteristics, and competence need to be an appropriate fit for a job (Ekuma, 2012). Quratulain and Khan (2015) found that public service employees who have low-pressure work environments and a strong personal fit to job requirements demonstrate higher motivation than those in a high-pressure environment with a low personal fit. Therefore, the fit between an employee and the job requirements is a critical factor in employee selection (Quratulain & Khan, 2015). Appropriate selection requirements could promote public service motivation as per Quratulain and Khan's findings. Furthermore, Gilbert (2013) explained that a performer's intrinsic motivation is difficult to amend. Thus, the initial selection of personnel who fit well with the job of marine inspection may benefit the U.S. Coast Guard MIP operationally and fiscally.

Performance Improvement Strategy 7: Leverage Positive Job Perceptions

I recommend that U.S. Coast Guard leaders bolster the positive perception many marine inspectors feel in performing their jobs by allowing them more time to concentrate on their primary duties. All participants related a positive perception regarding their work as a marine inspector. However, 77% of them referred to competing demands that detracted from their primary job. Dasgupta et al. (2014) found, in a study of three companies in India that employee public service motivation declined when there were conflicting goals in the workplace. Quratulain and Khan (2015) found that employees who were required to complete more than just their primary duties experienced increased work pressure that reduced their motivation further. Employees' positive perceptions regarding their jobs link powerfully to higher employee performance (Maharani, Troena, & Noermijati, 2013).

Recommendations for Future Research

The focus of this single-case study was the U.S. Coast Guard MIP, a component of the U.S. Coast Guard Prevention Directorate. Future researchers could address other components of the U.S. Coast Guard Prevention Directorate to include port state control activities, which relate closely to marine inspection but concern the inspection of foreign vessels. A study of the performance management practices in other organizational components within the U.S. Coast Guard could reveal potential commonalities with this study case. A broader view of cases may present a more holistic perspective of strategies necessary to improve performance. Further, extending this research to other U.S. federal

agencies or foreign governments may allow researchers to discover performance management gaps that exist across the government agency landscape.

Researchers can build on my findings and complete follow-up case studies regarding the effectiveness of performance improvement strategies in government agencies. If U.S. Coast Guard leaders act on the performance improvement strategies recommended in this study, future scholars could study the effects those strategies have on marine inspectors' performance. Each recommended strategy connects to at least one distinct performance support component of Fusch and Gillespie's (2012) model and, because each relates to employee performance, any one could represent a distinct study. Moreover, expanding the participant pool to include maritime industry stakeholders could expand the scope of the case. Maritime stakeholders may provide a perspective that could augment the findings of this study.

Reflections

I selected the topic of the U.S. Coast Guard MIP because I have a vested interest in seeing the program improve, and I wanted to explore performance improvement strategies for the MIP on the basis of the human competence model. I share similar views and beliefs to those of the participants and I understand their perspectives. I was a marine inspector from 2005 to 2011, after which I became an internationally certified auditor for the U.S. Coast Guard. I audited unit departments that included marine inspections from 2011 to 2015. While conducting audits, I recognized the need for this study. The discovery of performance improvement strategies was imperative to me, and I learned throughout this study that it was significant to many of my peers and superiors.

The study involved discussions with participants in my organization. During the interview discussions, I kept my personal opinions and thoughts to myself. In some instances, I had to make sure the participants elaborated on their responses because they assumed I knew what they meant, when I needed responses that contained more detail. I promoted conversational responses to extract quality data. I found that participants enjoyed participating in the study, and I was surprised when they thanked me for allowing them to participate. All of them exhibited interest in the findings of the study.

At the beginning of the study, because of my experiences as a marine inspector, I took care not to be narrow-minded in developing the study. As the study progressed, I learned that most of the participants had thoughts and experiences similar to mine. At first, I was surprised at their honesty and candor. However, once I began to realize the gaps that existed in the MIP, and how hard people were working to overcome them, I greatly appreciated the people I was interviewing. My use of purposive criteria clearly had filtered for qualified, experienced, and articulate study participants.

In addition, I found that performance management is potentially another of the many popular phrases used today. Such phrases include strategic management, operational management, organizational development, and leadership. I assumed performance management was a separate component within an organization. After completing my study, I believe that performance management is conceptually intertwined with strategic or organizational management. Organizational systems, from any vantage point, are just that, systems, and they need clear requirements, resources, motivations, incentives, training, skills, and operational capacity. I now find it hard to differentiate

organizational management terms and tend to refer to the overarching topic as *organizational systems management*. I believe performance management models, such as the human competence model, are an excellent way to explore organizational systems.

Summary and Conclusions

The U.S. Coast Guard MIP is a critical safeguard within our marine transportation system. U.S. Coast Guard marine inspectors protect millions of unknowing U.S. citizens each day. However, approximately two out of five U.S. Coast Guard marine inspectors are not confident in their ability to perform their jobs (USCG, 2012) and thus could use performance improvement strategies to affect their performance positively. This study included recommendations for seven performance improvement strategies to enhance marine inspector performance.

Organizational leaders must establish clear missions to promote exemplary performance (Gilbert, 2013). The U.S. Coast Guard MIP is no different in this regard. Participants' perceptions in this study revealed multiple missions for marine inspectors, thus I have concluded that the primary performance improvement strategy for the program is to clarify the marine inspector mission. Once a mission receives validation, implementing appropriate performance measures can begin. Ultimately, when the marine inspector mission is clear, U.S. Coast Guard leaders may market marine inspection accomplishments in a transparent and confident fashion to relevant stakeholders.

Information and knowledge management are critical to organizations, and those who provide appropriate information to employees in a timely manner should do so effectively (Manohar, 2013). When organizational leaders do not provide pertinent

information to an employee, confusion may ensue regarding requirements, expectations, and accomplishments (Hsu, 2014). According to the perceptions of the participants, throughout marine inspectors' careers U.S. Coast Guard policy sets the expectation that each marine inspector needs to obtain personal sources of information. Even further, marine inspectors often must filter through appropriate information sources to apply accurate and applicable requirements for each vessel inspection. A majority of the relevant requirements are available; however, inspectors do not routinely receive the information, which resides in numerous repositories. Thus, U.S. Coast Guard MIP leaders should ensure that marine inspectors receive the information for functional knowledge of vessel inspection requirements.

Employees, especially knowledge workers, need appropriate incentives to perform well (Muo, 2013). The study participants related that U.S. Coast Guard marine inspectors do not routinely receive incentives to provide quality inspections. Although I found that U.S. Coast Guard policy and guidance incentivizes marine inspectors to attain numerous qualifications, U.S. Coast Guard leaders need to determine how and why they provide incentives. Attaining more qualifications may not improve a marine inspector's competence or performance. Advertising qualification achievement as the main factor in career advancement may infer that the MIP is more a school than an inspection service. Consequently, MIP leaders could determine other, more appropriate performance measures and incentives that marine inspectors may respond to.

The study participants did not know of any selection requirements for marine inspectors, and I found no standardized selection criteria specific to marine inspectors in

my review of MIP documents. Employee selection is a critical factor that affects performance and relates to employee-job fit (Quratulain & Khan, 2015). For example, an employee who has no background in the inspection of marine vessels may not perform at the same level as an experienced marine engineer selected for the same position. Further, if employees do not have the motivation to be marine inspectors, their performance may not meet expectations. Standard marine inspector selection criteria may benefit performance.

All the participants described a positive perception of their job as a marine inspector. However, they related these problems: (a) multiple marine inspector missions; (b) inadequate information management; (c) differences in the management of skills, knowledge, and training; (d) lack of incentives; and (e) unspecified employee selection criteria. U.S. Coast Guard MIP leaders may be able to enhance marine safety, security, and environmental protection by addressing the potential gaps identified in this study. According to the participant perceptions in this study, marine inspectors have the intrinsic motivation to perform well, and they desire suitable tools, relevant information, and organizational support to do so.

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Appendix A: Interview Questions

Interview questions were as follows:

1. How is performance managed in the U.S. Coast Guard MIP, aside from individual officer evaluation reports?
2. What is the U.S. Coast Guard MIP mission?
3. What are the motives for being a marine inspector?
4. What is an exemplary marine inspection?
5. How do marine inspectors receive performance feedback?
6. What information does a marine inspector need to complete the job?
7. What tools support the performance of marine inspection?
8. How is the current training conducted for marine inspectors?
9. How are marine inspectors selected for their positions?
10. How are marine inspectors' knowledge and skill maintained?
11. How is a marine inspector incentivized?
12. What do you feel are the barriers, if any, for exemplary marine inspection performance?

Appendix B: USCG IRB Approval Memorandum

Strategies to Improve Marine Inspection Performance in the U.S. Coast Guard

U.S. Department of Homeland Security
United States Coast Guard

Commandant
United States Coast Guard

2703 Martin Luther King Jr. Ave. SE
STOP 7902
Washington, DC 20593-7902
Staff Symbol: CG-113
Phone: (202) 475-5182
Fax: (202) 372-8467
Email: Carlos.A.Comperatore@uscg.mil

6500
10 Mar 2015

MEMORANDUM

COMPERATORE.CARLOS.A.1272010524
Digitally signed by COMPERATORE.CARLOS.A.1272010524
DN: c=US, o=U.S. Government, ou=DoD, ou=PKI, ou=USCG, cn=COMPERATORE.CARLOS.A.1272010524
Date: 2015.03.09 16:02:40 -04'00'

From: Carlos A. Comperatore, Ph.D.
Chair, Coast Guard Institutional Review Board

Reply to
Attn of:
MAT4 Ed Mauch
(202) 475-5212

To: Joshua Buck, LT
FORCECOM

Subj: DISCOVERING PERFORMANCE IMPROVEMENT STRATEGIES FOR THE UNITED STATES COAST GUARD MARINE INSPECTION PROGRAM

Ref: (a) Coast Guard Human Research Protection Program, COMDTINST M6500.1 (Series)
(b) 45 CFR 46 – Protection of Human Subjects

1. The Coast Guard Institutional Review Board (CGIRB) reviewed the subject submittal in accordance with reference (a) and (b).

2. The CGIRB recognizes the Walden University Institutional Review Board as having primary oversight of this study. It is also confirmed that the US Coast Guard Office of Commercial Vessel Compliance (CG-CVC) is serving as the Coast Guard program sponsor for your research.

3. Exemption from further CGIRB oversight is granted with the understanding that no further changes or additions will be made to the study procedures, data collection instruments, and/or Principle Investigators involved in the conduct of this research. Any changes shall be submitted to the CGIRB for review and approval prior to beginning or continuing data collection.

4. Any unanticipated problems related to your use of human subjects in this study must be promptly reported to the CGIRB through its coordinator, MAT4 Ed Mauch, in addition to meeting any stipulations required by the Walden University Institutional Review Board.

5. Please submit status updates to the CGIRB every six months as long as your study remains active.

6. Please notify the CGIRB coordinator upon completion of your study and submit, via email, a copy of your report or brief summary of your findings and conclusions.

7. Should you have any questions or concerns, do not hesitate to contact MAT4 Ed Mauch at edward.r.mauch@uscg.mil.