Original article

The Impact of Seafarers' Perceptions of National Culture and Leadership on Safety Attitude and Safety Behavior in Dry Bulk Shipping *

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Abstract

This research aims to examine the effects of national culture and leadership style on safety performance in bulk shipping companies. Survey data collected from 322 respondents working in dry bulk carriers was used, a multiple regression analysis was conducted to analyze the influence of national culture and leadership styles (i.e. transformational, passive management, and contingent reward) on safety attitude and safety behavior. The results indicate that national culture dimensions such as power distance, uncertainty avoidance, collectivism, and long-term orientation had a positive influence on safety behaviour. Long-term orientation had a positive influence on safety attitude, whereas masculinity had a negative influence on safety attitude of seafarers. Specifically, this research found that transformational leadership had a positive influence on safety attitude and safety behaviour of seafarers. Moreover, practical implication from the research findings to improve ship safety in dry bulk shipping were discussed.

Keywords: Bulk shipping; National culture; Transformation leadership, Transactional leadership, Safety attitude, Safety behavior

I. Introduction

The development of global trade and economics is dependent on shipping services. Over 90 % of global trade is carried by sea (International Maritime Organization, 2015). Shipping is a highly international and multicultural industry, which has led to a significant change of labor market of seafarers that are becoming more and more multinational. Therefore, multiculturalism is a general feature of crews in the current ship operations. Around 70-80 % of world's merchant fleet has multicultural crews (Hanzu-Pazara and Arsenie, 2010). Multiculturalism crews on board with a lack of a common language or cultural difference could result in a high risk of work environment on ships (Theotokas and Progoulake, 2007). For example, there was the incident of the container ship Cosco Busan striking the San Francisco Bay Bridge on 7 November 2007, resulting in 53,500 gallons of bunker fuel being discharged into the bay and causing pollution. One of the major causes of the collision was a lack of effective communication between American pilot and Chinese Captain during the accident voyage (Marine Department, 2007). A report from the Philippine National Maritime Polytechnic (2002) also pointed out the Filipino seafarers also had communication problems, which are induced by different attitude and culture manifested among crew members. Based on the study of Hofstede and Bond (1988), Lu et al. (2012) investigated the impact of national culture on human failures in container shipping and found that there will be fewer human failures when seafarers have low national culture with respect to power distance, and high national culture dimensions such as collectivism and uncertainty avoidance.

With the reception of the studies of Lu et al., (2012) and Håvold (2007), relatively few research have been done to examine the national culture in shipping and how these national cultural differences influence on seafarers safety behaviors. National culture can be defined as "… the collective programming of the mind which distinguishes the members of one group or society from another …"(Hofstede, 1980, p. 25). Hofstede (1980) identified national culture by basing on four national cultural dimensions, namely power distance, individualism/collectivism, uncertainty avoidance, and masculinity/femininity. Furthermore, Hofstede and Bond (1988) added the fifth dimension, Confucian dynamism/long-term orientation to link national culture with economic growth. However, a majority of previous studies have suggested that organizational leaders play an important role in influencing employees' safety attitudes and behaviors in the workplace (Kelloway et al., 2006). Prior studies have shown that employees' perceptions of leaders' and supervisors' commitment to safety can predict employees' willingness to raise safety issues in the workplace (Cree and Kelloway, 1997; Hofmann and Morgeson, 1999; Mullen, 2005). We argue that effective leader behavior could foster employees' safety behaviors and improve safety-related outcomes. On the contrast, we note that passive or ineffective leadership could negatively influence employees' safety behavior and increase potential risks (Keeloway et al., 2006). Nevertheless, there seems a lack of previous research which has examine how national culture and leadership simultaneously influence employees' safety behaviors because these two variables co-exist within a ship operations.

Lu et al. (2012) have examined the influence of national culture on human failures, specifically focusing on seafarers who are working in the container shipping vessels. Similar to