



Employee safety single vs. dual priorities: When is the rate of work-related driving accidents lower?

Ron Aaron Malka^a, Shalhevet Leibovitz-Zur^b, Eitan Naveh^{a,*}

^a Faculty of Industrial Engineering and Management, Technion Israel Institute of Technology, Technion City, Haifa, 32000, Israel

^b Quality and Reliability Engineering Department, The Achi Racov School of Engineering, Kinneret Academic College, Sea of Galilee, The Jordan Valley, 15132, Israel

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ABSTRACT

Applying both occupational safety and ambidexterity theories, we investigate which situation in organizations leads to a lower number of work-related road accidents: a single-priority situation focused on road safety, or a dual-priority situation in which both road safety and customer service are priorities. Occupational safety theory puts forward an ‘either-or’ approach in which employee safety must be the first priority, above and beyond all others. In contrast, the ambidexterity theory’s ‘both-and’ approach suggests a simultaneous coexistence of priorities. Results from forty-three units in three organizations that make intensive use of work-related driving and aim to deliver good customer service are described. The results suggest that when the level of customer service priority was low, an increase in the level of road safety priority significantly decreased the number of road accidents. However, when the level of customer service priority was high, an increase in the level of road safety priority was not associated with less road accidents. The results show that work-related road accidents would be lower in a safety-first, single-priority situation compared to a dual-priority situation encompassing both road safety and customer service. We discuss the theoretical and practical implications of these results.

1. Introduction

Road accidents during work-related driving, that is, driving in the course of work, account for a high number of work-related injuries and deaths in the United States (Bureau of Labor Statistics, 2016; Naveh and Katz-Navon, 2015). Organizations are required to take responsibility for their road accidents, especially at a time when many such entities in different sectors in the modern economy provide their customers with services that include, or are mainly about, driving. For example, delivery companies (e.g., FedEx and UPS) supporting electronic commerce (e.g., Amazon and eBay), and commerce in general (e.g., retailers such as Target and Walmart); food delivery firms (e.g., Domino’s Pizza and Pizza Hut); and manufacturing industries which intensively use supply chains. This paper aims to improve our knowledge on how to reduce work-related driving accidents using current advances in management theory.

Despite the large numbers of work-related road accidents, management researchers have paid relatively little attention to road safety. To date, few studies have used management theories, and particularly occupational safety theory, to explain road accident occurrence (Mooren et al., 2014; Naveh and Marcus, 2007). Occupational safety theory has been found to explain safety performance within

organizations and is suggested to be relevant also to the understanding of road safety behavior (Naveh and Katz-Navon, 2015). Thus, the first contribution of this study lies in the expansion of occupational safety theory (Hofmann et al., 2017; Beus et al., 2016; Naveh and Katz-Navon, 2015; Naveh and Marcus, 2005) to explain road accidents involving work-related driving.

A substantial limitation we identify in the few existing studies on work-related driving that make use of occupational safety theory (Naveh and Katz-Navon, 2015; Mooren et al., 2014) is that they neglect the fact that road safety is only one of the many priorities that organizations deal with. The contradictory nature and oppositional demands of such priorities affect the independent influence of any single priority (Smith et al., 2017). Thus, referring to road safety without taking into consideration other oppositional priorities limits our understanding of the relationship between road safety practices and work-related road accidents and of the ways improve this relationship. In this study we examine the influence of priorities other than road safety on the incidence of road accidents, making specific reference to customer service (Schneider et al., 1998), which is an important priority in many organizations.

To research this issue, we studied units in three organizations intensively involved in work-related driving. One of them is a pizza

* Corresponding author.

E-mail address: naveh@ie.technion.ac.il (E. Naveh).

delivery organization that needs to deliver the product fast and on time and to get as quickly as possible to the next customer in order to achieve customer satisfaction; however, it must also enforce a safe way to drive. When would the number of road accidents be lower: in a dual-priority situation emphasizing both road safety and customer service, or in a single-priority situation that places road safety above all?

Two relevant theories provide contradictory answers to this question. Occupational safety theory suggests an ‘either-or’ approach in which employee safety must be the first priority, above and beyond any other (e.g., Zohar and Luria (2005), who view employee safety as a priority above work pace and workload). The second relevant theory, the paradox and ambidexterity theory, deals in oppositional demands. It proposes a ‘both-and’ approach, suggesting the simultaneous coexistence of oppositional demands and priorities as a way to achieve best performance (Smith et al., 2017). However, there is no sufficient support for the applicability of paradox and ambidexterity theory beyond the realm of innovation-oriented tasks (Gebert et al., 2010). So far, paradox and ambidexterity theory has not been applied to contradictory priorities related to employee safety. Thus, the second contribution of this study is an improved understanding about how to better manage oppositional demands and priorities, and how to reconcile the contradiction between occupational safety theory and paradox and ambidexterity theory so that employee road safety is maximized while taking other priorities into consideration.

2. Literature review

Our study is centered on the team level, following a similar approach used in studies relevant to our theory’s development and contribution, such as Gibson and Birkinshaw’s (2004) ambidexterity study, Gebert et al. (2010) on paradox, and Naveh and Katz-Navon (2015) on road safety. We examine a moderated mediation model for the relationship between road safety practices and number of road accidents (see Fig. 1).

2.1. Road safety practices and number of road accidents

Management practices are rules and routines that establish the administrative mechanisms through which work is done (Birkinshaw et al., 2008). These are instructions for employees that describe principles, techniques, processes, and actions about how to perform their job. They represent the best available knowledge to guide employees to achieve best performance (Briner et al., 2009; Gibson and Birkinshaw, 2004; Naveh and Erez, 2004). Regarding employee road safety at work, the available knowledge is summarized in management standard ISO 39001, Road Traffic Safety (RTS) Management Systems (International Organization for Standardization, 2012). Similar to the widely used standards on quality (ISO 9001) and environmental management (ISO 14001), the ISO 39001 standard provides a list of managerial practices that refer to the entire scope, i.e., the different aspects and details, of its domain. In the case of ISO 39001, the entire scope of an organization’s

operation concerned with the achievement of road safety refers to ways to plan, establish, implement, maintain, and improve a road safety management system. Specifically, these include practices that refer to training employees to enhance their driving skills, vehicle maintenance, restriction of drivers’ work hours, rules to eliminate fatigue, and holding routine discussions and reflection in order to learn from accidents and near misses.

Current research provides limited evidence on the extent to which the implementation of these road safety practices by a team actually reduces its rate of road accidents. On the one hand, driving is associated with uncertainty and is influenced by a variety of factors beyond the team’s control. Therefore, the extent to which managerial practices are associated with results in the case of road safety is lower compared to organizational aspects such as customer service, product quality, or employee safety (Schneider et al., 1998; Naveh and Erez, 2004; Zohar, and Luria, 2005, respectively). Mooren et al. (2014) reviewed the literature concerning safety management interventions that have been effective in reducing injury outcomes in occupational health and safety and in road safety. They assessed the applicability of road safety managerial practices to the reduction of crash and injury outcomes, specifically in heavy vehicle transport. They concluded that there is little robust empirical research on the heavy vehicle transport sector that provides evidence of effective road safety managerial practices leading to less crashes and injuries.

On the other hand, while the degree of association between road safety practices and road accidents may be lower than that of practices and performance in the domain of customer service, product quality, or employee safety, some studies provide empirical evidence indicating that the implementation of road safety practices within a team reduces road accidents. Naveh and Marcus (2007) identified 40 ISO-9001-certified U.S. trucking companies and compared their rate of road accidents before and after the ISO 9001 certification. They also compared them to a group of motor carriers that had similar characteristics but were not certified. The rate of road accidents among certified carriers was significantly lower after certification than before, and it also was significantly lower than that of non-certified carriers. Luke and Heyns (2014) showed that the implementation of an intervention aimed at managing driver behavior by eliminating risky behavioral habits succeeded in reducing the accident rate. Naveh and Katz-Navon (2015), using a longitudinal study design on a road safety intervention consisting of road safety practices versus control groups, demonstrated that the intervention decreased the number of traffic violation tickets.

These different approaches to road safety practices and their influence on road accident rates call for more attention to the conditions affecting this relationship. One such condition emerging from the vast literature on implementation of management practices refers to the fact that such implementation is not uniform. Differences in the way such implementation is executed influence performance gains (Castka and Corbett, 2015; Naveh and Marcus, 2005). In particular, with regard to widely-used management standards such as ISO 9001 (quality) and ISO 14001 (environment), variations in their influence on performance are a result of partial implementations that do not refer to the complete scope of all relevant aspects of a quality or environmental system (Naveh and Marcus, 2005). For example, the complete scope of ISO 9001 management practices must include aspects of the product’s entire life cycle, from product design through purchasing, manufacturing, and product service, and also integrate technological, operational, and behavioral aspects (Naveh, 1999). Thus, we suggest that road safety practices related to the complete scope of the road safety domain (according to the ISO 39001 standard) would reduce the rate of road accidents because they would guide employees on how to behave in order to drive in a safer manner. For example, an implementation that refers to vehicle maintenance but not to driver training is incomplete; therefore, its association with road accident rates is weaker than an implementation that refers to both aspects. Thus, we hypothesize,

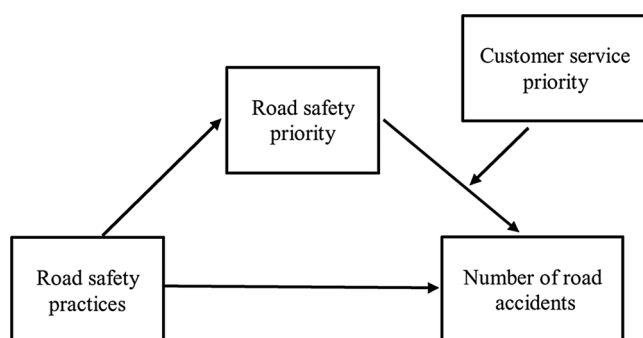


Fig. 1. Research model.

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