

# A Conceptual Framework for Safety Performance Effectiveness: The Influence of Management Commitment, Safety Training and Safety Communication in Malaysian Manufacturing Industry.

M. A. M Kassim<sup>1,\*</sup>, N. A. M. Jumri<sup>1</sup>, M. S. Abdullah<sup>1</sup>, U. N. Saraih<sup>1</sup>, N. Nordin<sup>1</sup>

<sup>1</sup>Faculty of Applied and Human Science, Universiti Malaysia Perlis (UniMAP), Jalan Alor Setar-Kangar, 01000 Kangar, Perlis, Malaysia

\*Corresponding author's email: muhammadasyraf@unimap.edu.my

**ABSTRACT:** The manufacturing industry has made a significant contribution to the economic development of Malaysia. Unfortunately, manufacturing also has contributed the most to occupational accidents in Malaysia for the last 6 years. The main aim of this study is to create a framework for examining the causal links between management commitment, safety training, and safety communication to safety performance in the Malaysian manufacturing industry context. To serve this objective, this paper develops a conceptual framework of safety performance effectiveness based on Heinrich's Domino Theory. Hence, this study focuses on the conceptual framework determining the relationship of safety performance with its critical factors such as management commitment, safety training, and safety communication in the Malaysian manufacturing industry.

**Keywords:** *Management commitment; Safety training; Safety communication; Safety performance.*

## 1. INTRODUCTION

The manufacturing industry has made a significant contribution to the economic development of Malaysia[2]. The manufacturing industry in Malaysia must maintain worker productivity because it contributes significantly to Malaysia's GDP[1]. But unfortunately, manufacturing has contributed the most to occupational accidents in Malaysia for the last 6 years [1].

Table 1 Occupational Accident Statistics by Manufacturing Industry from 2016 until 2020[1]

Year	No Accident reported
2016	2315
2017	1691
2018	3228
2019	4948
2020	4506

The total Occupational Accident Statistics by the manufacturing industry from 2016 until 2020 were investigated is fluctuated. Therefore, the safety quality in the manufacturing industry is still questionable by observing the number of accidents[3]. If this situation continues, it will lead to lower productivity, higher production cost, and a lack of confidence among manufacturing employees [3]. As is a developing country Malaysia should have more investigation into various factors that influence the safety performance of Malaysia's manufacturing industry is crucial to improve the businesses and productivity of the country.

## 2. HEINRICH'S DOMINO THEORY

Herbert Heinrich established the domino theory of accident causation in the 1930s [4]. Unsafe act, mechanical or physical hazard, accident, or injury are the five dominoes in the model. According to these notions, accidents are predictable events, thus, each causal element reinforces the others. [4]. Bird & Loftus (1976) already rationalized the theory to mimic management's system or relationship in Heinrich's series of accident causes [4]. The theory also emphasizes the possibility of contact incidents if unsafe acts and conditions are avoided. Built on the above, this current framework uses Heinrich's Domino theory as the underpinning theory.

## 3. SAFETY PERFORMANCE

Safety performance is actions or behavior that people exhibit in the workplace to facilitate the health and safety of workers, customers, the public, and the community[5]. To avoid their employees being involved and suffering from injuries, companies pursue improved safety performance indicators. There were two distinct forms of safety behaviors: safety participation and safety compliance[5]. The goal for safety participation is to establish a safety-supportive environment. Whereas the target for safety compliance is to ensure that employees work in a manner that adheres to the organizations' safety procedures and regulations[5]. Therefore, this study has established that the management commitment, safety training, and safety communication were playing an imperative role in influencing employees' safety performance, in terms of safety participation and safety compliance[5]

## 4. MANAGEMENT COMMITMENT

Organizations must be cognizant of the significant role of management in improving the overall safety performance of the organization's operations[6]. Managers need to be active in identifying and assigning resources for the successful implementation of safety[6]. Moreover, management commitment is demonstrated in different ways, such as security education and training, rewarding and empowering employees to make decisions[6]. The management commitment can shape the perception of employees who operate safely, thus reducing accidents, injuries, and fatalities[5]. Consequently, management commitment high contribution to promote safety compliance among employees and increase safety performance[6]. In the light of the above, it is hypothesized that

*Hypothesis 1: There is a significant relationship between management commitment and safety performance in the Malaysian manufacturing industry.*

## 5. SAFETY TRAINING

Safety training is the most significant safety management activity, which can predict safety knowledge, safety motivation, safety compliance, and safety participation[5]. Effective safety training is a critical aspect of every successful business, accident prevention plan, or occupational safety and health plan. It enhances the behavior, knowledge, and attitudes of employees toward safety[6]. In addition, systemic planning safety training towards new hiring programs, mentorship programs and succession planning, guidance for new staff, and improvements to occupational health and safety are more comprehensive and contributing to improved safety-related outcomes in organizations[6]. Employee competence is a crucial feature of the safety environment in the manufacturing industry. Therefore, this study proposes an enormously significant relationship between safety performance and safety training by all shreds of evidence presented, thus formulating a hypothesis.

*Hypothesis 2: There is a significant relationship between safety training and safety performance in the Malaysian manufacturing industry.*

## 6. SAFETY COMMUNICATION

Two-way communications between employees and managers to build an effective implementation of safety possible. Open and frequent safety communication between managers and employees is critical for organizations with a high safety performance level[5]. Good safety communication practices should facilitate safer behavior and fewer injuries at the workplace[6]. Listening to safety issues and workers' concerns would allow supervisors to identify safety management system risks or shortcomings in the working environment and develop control measures before an accident occurs[5]. Furthermore, effective communication mechanisms are necessary to involve employees in safety activities, gain cooperation and support, and maintain a positive culture[6]. In the light of the above, it is hypothesized that

*Hypothesis 3: There is a significant relationship between safety communication and safety performance in the Malaysian manufacturing industry.*

## 7. CONCEPTUAL FRAMEWORK

This conceptual framework supposes that management commitment, safety training, and safety communication influence the safety performance effectiveness among employees in the Malaysian manufacturing industry. Based on an extensive literature review, a strong relationship was found between management commitment, safety training, and safety communication toward safety performances.

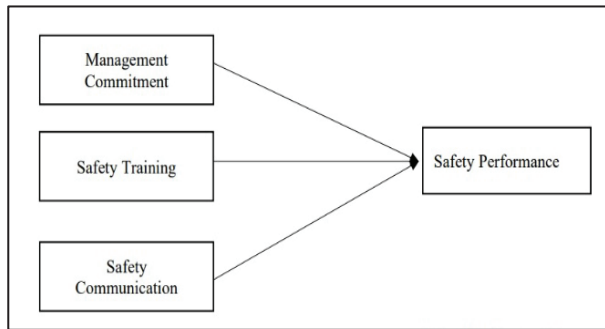


Figure 1: Conceptual Framework

## 8. CONCLUSION

This conceptual paper was conducted to develop a framework that can be used to study the safety performance among manufacturing employee in Malaysia sitting by presenting safety performance and it critical factor. Previous safety performance studies have recognized the importance of management commitment, safety training, and safety communication to safety. This conceptual paper employed Heinrich's domino theory to support this framework. This study contributes to the existing literature by theoretically demonstrating that management commitment, safety training, and safety communication were the most important variables related to safety performance effectiveness. The study will be very beneficial to Malaysia's manufacturing industry in terms of promoting worker safety, and it will make several practical contributions.

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