



Health and safety management practices of contractors in South East Asia: A multi country study of Cambodia, Vietnam, and Malaysia



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ABSTRACT

The construction sector is notorious for accounting for numerous occupational deaths, injuries and illnesses in many countries. In emerging economies this situation could be direr, and health and safety (H&S) management by contractors is important to tackling this. This study investigated the H&S management practices of contractors in three South East Asian countries (Malaysia, Vietnam, and Cambodia) with the view to highlighting implementation issues. A questionnaire instrument containing 40 H&S management practices was administered to contractors in the three countries. Analysis of the data revealed that in each of the three countries there are at least seven practices that are not commonly implemented by contractors. Whilst the study further suggests this to be acute in Malaysia and Cambodia, it also elucidates that the apparent situation could be due to inter alia: a significantly greater proportion of the contractors in the Malaysia sample being micro size firms; and also the effect of two national occupational H&S programmes implemented in Vietnam from 2006 to 2015. Overall, the findings offer an opportunity for contractors and key industry stakeholders (e.g. state authorities) to reflect on their approach/initiatives to improving H&S management in construction. Further studies which could offer additional empirical realities are also suggested.

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1. Introduction

In several countries, it is common to hear of tragic accidents/incidents in construction that result in injury, death or illness to workers and members of the general public. For instance, in Australia it has been reported that on average there are about 46 compensated fatalities yearly, and in USA the construction sector accounts for about 21% of all occupational deaths from injuries (see [Lingard et al., 2010](#); [Hallowell and Gambatese, 2009](#)). The costs associated with these tragic occurrences can be huge and they are borne by the victims, their families, employers, the industry, governments and society as a whole. For instance in the UK, it is estimated that injuries and new cases of illness resulting from working conditions in construction cost society over £1.1 billion a year ([HSE, 2014](#)). In USA, based on 2002 national incidence data from the Bureau of Labour Statistics, the costs of non-fatal and fatal injuries in the construction industry were estimated at US\$11.5 billion in 2002 ([Waehrer et al., 2007](#)).

Whilst accidents and their tragic consequences are commonplace in construction the world over, in emerging and developing economies (i.e. middle income and low income economies) the situation seem direr compared with the developed (high income) economies. For instance, in South Africa 162 fatalities (excluding motor-vehicle accidents) were recorded in 2007/2008 (see [South Africa Construction Industry Development Board \(CIDB\), 2008](#)), while in the UK 72 worker fatalities were recorded in 2007/2008 ([HSE, 2015](#)). With global construction output forecasted to increase by over 70% to US\$15 trillion by 2025 ([Global Construction Perspective and Oxford Economics, 2013](#)), the health and safety (H&S) situation in emerging and developing economies could get worse if appropriate actions are not taken. Whilst H&S is multi-pronged and as such a myriad of actions/measures is needed to drive improvement, it is widely acknowledged that the management of H&S in the workplace plays a key role in reducing accidents, injuries and illnesses (see [Lingard and Rowlinson, 2005](#); [Aksorn and Hadikusumo, 2008](#)). However, in emerging and developing economies, including those in South East Asia, there is limited research evidence about the extent of implementation of H&S management by contractors. Such insight is not only helpful in obtaining a generic sense of the state of H&S maturity

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of contractors operating in the construction sector of those countries but more so it could be helpful in identifying elements/areas of H&S management that are lagging amongst contractors. The South East Asian region in particular is of significance as it is one of the dynamic areas of the world economically. This region is composed of 11 countries some of which have been referred to as a new generation of 'Asian Tigers' (*Global Construction Perspective and Oxford Economics, 2013*). In this region, countries such as Indonesia, Vietnam and Philippines have been estimated to represent a construction market of circa US\$ 350 billion (over twice the output of the UK construction sector in 2013 (*Rhodes, 2015*)) with annual growth of over 6% (*Global Construction Perspective and Oxford Economics, 2013*). Despite, the economic vibrancy of this region, estimates have shown high number and rates of occupational accidents and fatalities for countries in the region (*Hämäläinen et al., 2006; Takala et al., 2014* papers). For instance, global estimates of occupational accidents reported by *Hämäläinen et al. (2006)* show occupational fatalities rates of 28.3, 18.3 and 27.0 per 100,000 workers for Cambodia, Malaysia and Vietnam respectively, compared with much lower rates in countries such as the UK and Malta (0.8 per 100,000 workers), France (3.0 per 100,000 workers), Australia (3.2 per 100,000 workers), Japan (3.2 per 100,000 workers), and Germany (3.2 per 100,000 workers). Specifically within the construction sector, occupational accidents, injuries, and deaths are also commonplace in South East Asian countries. For instance, in Malaysia, out of the 214 occupational fatalities recorded in 2015, the construction sector accounted for 88 fatalities which is the highest amongst all the sectors (*Department of Occupational Health and Safety (DOSH), 2015*). Whilst fewer fatalities were recorded in Singapore in 2015, the construction sector also accounted for the highest number of occupational fatalities (i.e. 27 out of 66 fatalities) (*Ministry of Manpower, 2015*). In Vietnam, it is reported that in 2013, the construction industry accounted for about 31% of industrial fatalities of 627 (*Ministry of Labour Invalid and Social Affairs (MOLISA), 2014*). In Thailand, industrial activities including construction, machine installation, and water-well digging accounted for about 155,000 accidents and diseases from 2003–2011 (*Occupational Safety and Health Bureau, 2012*).

Given the outlook of construction H&S performance in the South East Asian region, the forecasted growth in construction in the region, and the significance of H&S management to reducing accidents, injuries, and illnesses, an inquiry to ascertain the implementation of H&S management practices of contractors in the countries within this region is timely and relevant to the extent of flagging lagging areas and practices. This study therefore investigated the extent of implementation of H&S management practices by contractors in South East Asian countries, particularly Vietnam, Cambodia, and Malaysia. Besides works by *Nguyen et al. (2015)* and *Phung et al. (2015)* which offered preliminary insight into H&S management practices of contractors in separate regions of Vietnam (*Nguyen et al. (2015)* reported on a few practices in Northern Vietnam and *Phung et al. (2015)* focused on Southern Vietnam), there is a dearth of research work which offer a snapshot view of the state of H&S management amongst contractors in these countries. Whilst there are studies that have inquired into the H&S management practices of contractors, the domain of those studies are different (e.g. *Kheni et al. (2008)* in Ghana, and *Agumba et al. (2014)* in South Africa). For this study, the rationale for selecting the above three South East Asian countries are: (1) the outlook of occupational H&S performance in the countries; and (2) the dearth of research on contractors' H&S management practices in the countries. Additionally, consideration was given to the availability of industry contacts known to the researchers in these countries to facilitate data collection.

In the next section, a review of H&S management systems/mod-els is presented to identify key elements and associated practices to constitute the basis for an appropriate research design and instrument. The literature review and the research design are followed by the findings, discussion and concluding remarks.

2. Health and safety management

According to *Lingard and Rowlinson (2005)*, implementing a H&S management system is an important step in ensuring that H&S is systematically managed within an organisation. Concerning H&S management system (HSMS), the International Labour Organisation (ILO) describes it as a set of interrelated and interacting elements to establish OSH [occupational safety and health] policy and objectives, and to achieve those objectives (*ILO, 2001, p.19*). The UK Health and Safety Executive (HSE) describes a HSMS to be a formal management system or framework that helps to manage H&S (*HSE, 2013*) and *Griffith and Howarth (2001)* describe it as simply a way of doing things. HSMS can thus be thought of as being an identified system of procedures to create a safe working environment. HSMS having just been developed since 1990s (*Hasle and Zwetsloot, 2011*), *Lingard and Rowlinson (2005)* state that the earliest efforts to prevent detrimental H&S outcomes mainly focused on solutions for safe physical environment. However, evidence of workplace organisational factors (including an organisation's H&S management activities) playing an important role in occupational H&S has given impetus to the systematic management of H&S in the workplace (*Lingard and Rowlinson, 2005*). Whilst the literature is replete with several HSMSs the following section attempts to capture some of the prominent ones. It also highlights the emergence of the integration of H&S management system with other management systems, e.g. quality and environment. Whilst the purpose of the review is not to draw a conclusion on which system(s) is more effective but rather to identify the elements/practices therein, the review also acknowledges the prevailing debates in that area (see *Pérezgonzález, 2005*).

2.1. Health and safety management systems

It can be said that H&S management systems developed remarkably from the 1990s in two main streams: the development of laws which required systematic H&S management (e.g. EU framework directive); and the introduction of some H&S management models (e.g. BS OHSAS 18001) (*Hasle and Zwetsloot, 2011*). However, fundamentally, the prevention of accidents and their associated undesirable outcomes has been the main stimulus for their development. Amongst the prominent HSMS or models are those by the HSE (1997, 2013), British Standard BS OHSAS 18001:2007 (*BSI, 2007*), and International Labour Organisation (*ILO, 2001*). These are discussed next.

2.1.1. The HSE's (1997) Successful Health and Safety Management Guidance (HSG65)

This model is widely known and it has constituted the basis for other subsequent models (see *Pérezgonzález, 2005*). The model has six interconnected elements as follows:

1. *Policy*: A general statement and overall guiding principle regarding H&S of an organisation.
2. *Organisation*: This covers the roles, responsibilities and provision of resources within an organisation to effectively control H&S issues.
3. *Planning and implementing*: This covers goal-setting and operating the system.

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