ACHIEVING ZERO ACCIDENTS: A STUDY OF THE INFLUENCES OF
INDONESIAN NATIONAL AND MILITARY ORGANISATIONAL CULTURES
ON AVIATION SAFETY

A thesis submitted in fulfilment of the requirements for the degree of

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STATEMENT OF AUTHORSHIP

I certify that except where due acknowledgement has been made, the work is that of the author alone; the work has not been submitted previously, in whole or in part, to qualify for any other academic award; the content of this thesis is the result of work, which has been carried out since the official commencement date of the approved research program; and, any editorial work, paid or unpaid, carried out by a third party is acknowledged.

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February 2018
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ABBREVIATIONS

ABS : Asal Bapak Senang (As Long As the Boss Happy, As Long As It Pleases the Master, Yes Sir Attitude, or Keep the Boss Happy)

AFI : Air Force Inspectorate

ASMS : Aviation Safety Management System

BKR : Badan Keamanan Rakyat (the People's Security Forces)

BPS : Badan Pusat Statistik (Central Bureau of Statistic)

CASA : Civil Aviation Safety Authority

CIA : Central Intelligence Agency

CO : Commanding Officer

CRM : Cockpit / Crew Resource Management

CSA : Command Safety Assessment

CSCAS : Command Safety Climate Assessment Survey

Dislambangjaau : Dinas Keselamatan Terbang and Kerja Angkatan Udara (Indonesian Air Force work and flight safety agency)

DoD : Department of Defence

FAA : Federal Aviation Administration

FOD : Foreign Object Damage

GDP : Gross Domestic Product

HAZMAT : Hazardous Material

HFQMB : Human Factors Quality Management Board

HREC : Human Research Ethic Committee

ICAO : International Civil Aviation Organisation

IDAF : Indonesian Air Force

IISS : International Institute for Strategic Studies
Ishoma : *Istirahat, sholat, dan makan siang* (break, pray, and lunch)

Kodikau : *Komando Pendidikan Angkatan Udara* (Air Force Training Command)

Koopsau : *Komando Operasi Angkatan Udara* (Air Force Operation Command)

MCAS : Maintenance Climate Assessment Survey

MOSE : Model of Organisational Safety Effectiveness

NASA : National Aeronautics and Space Administration

NCO : Non-Commissioned Officer

PICF : Participant Information and Consent Form

PP : *Peraturan Pemerintah* (Government Regulation)

PPE : Personal Protective Equipment

RAF : Royal Air Force

RAAF : Royal Australian Air Force

SMM : Safety Management Manual

SMS : Safety Management System

SOP : Standard Operating Procedures

Suspa Lambangja : *Kursus Keselamatan Terbang dan Kerja* (Safety Course),

TNI : *Tentara Nasional Indonesia* (Indonesian National Armed Forces)

TNI AU : *Tentara Nasional Indonesia Angkatan Udara* (Indonesian Air Force)

UAV : Unmanned Aerial Vehicle
ABSTRACT

Accident prevention in the aviation industry requires not only a good safety management system (SMS) but also the right safety culture that makes safety systems work. Research shows that safety culture in an organisation is greatly influenced by national and organisational cultures. However, much of the safety research has focused more on safety climate which measures perceptions and attitudes of workers in regard to safety. Moreover, most of the safety climate research has been conducted using a quantitative approach, which cannot uncover the basic assumptions of the culture itself. In addition, the impact of national and military culture on aviation safety has not been addressed in the small amount of safety climate research which has been conducted in military organisations to date.

One of the rationales for conducting this study is a growing concern regarding aircraft accidents that occur every year even though Indonesian military organisations have implemented safety management systems. This research was intended to examine the influence of Indonesian national culture and military organisational culture on aviation safety, particularly in the adoption and implementation of the SMS. The adoption and the implementation of an SMS have not made a significant impact since the organisation still experiences aircraft accidents. As the SMS is predominantly based on Western concepts of management, this study attempted to identify the characteristics of the Indonesian national and military organisational culture that influence the implementation of the program. Furthermore, this study investigated and identified the perception and behaviour of the military personnel and how management manages safety issues within the organisation.

This study employed a qualitative research design, comprising multiple case studies. An ethnography-style research approach was adopted in order to acquire an understanding of the basic assumptions of a culture that drive people to a particular behaviour. In-depth semi-structured interviews, observations, and document analysis were the techniques used to gather
data. Twenty-seven military personnel from four different operational air units participated in this research. The participants come from various backgrounds in terms of corps, ranks, and positions within their respective units. Thematic analysis was applied in this study and six phases of analysis, proposed by Braun and Clarke (2006) and Clarke et al. (2015), were used as guidance.

Analysis of the findings showed that the Indonesian military culture has been much influenced by its national culture. Moreover, the unique characteristics of the Indonesian national and military cultures have significant influences on military aviation safety. Several characteristics of the Indonesian national culture, most of which have their origin in Javanese culture, such as hierarchical structure, authoritarian structure, rukun/harmony, unggah/ungguh/manner, sungkan/reluctant, and asal bapak senang (ABS)/as long as the boss is happy, have impeded the implementation of the SMS and the promotion of safety culture. Similarly, some characteristics of the Indonesian military organisational culture such as punishment and reward, blame culture, class/rank structure, and siap/can-do culture are factors that obstruct the promotion of a safety culture and the implementation of an SMS. In addition to those cultural factors, the lack of safety education and training, and various perceptions of what constitutes safety have created a situation in which individual safety awareness has declined. However, one interesting finding reveals that there is a tendency for rules and procedures to become another alternative method for dealing with uncertainty. The unit personnel believe that rules and procedures can assist them to cope with uncertainty, in addition to their religious and spiritual beliefs.

This study offers some contributions to knowledge and has the capacity to provide recommendations for Indonesian military organisation regarding its safety program. First, this is an empirical study that provides insight into how the cultural factors influence the implementation of the safety management systems and the promotion of a safety culture in
Indonesia. Through this study, an in-depth understanding was acquired of the impacts of the unique military organisational culture on the adoption of Western concepts of management. It is expected that this study will extend various research on safety culture. Second, the findings of the study indicate that one cultural dimension - coping with ambiguity or uncertainty avoidance - is not consistent with Hofstede and GLOBE’s description. In addition to religious and spiritual beliefs, the findings indicate that the increased use of rules and clearly-defined procedures are an additional means of coping with uncertainty. Third, this study recommends that the Indonesian military organisation integrate cultural factors into its organisation safety system, which is essential if the organisation is to successfully implement the SMS, promote a safety culture, and improve its safety.
CHAPTER ONE

INTRODUCTION

This chapter begins with an explanation of the importance of safety. Safety is one of the important elements of the aviation industry which cannot be compromised. The chapter describes the evolution of safety measures that began in the early days of aviation and continue to be developed to this day. The chapter introduces the research context and presents the research rationale that provides a substantive basis for this study. Subsequently, the research objectives and questions of the research are presented. The chapter also discusses briefly the significance of the study and concludes with an outline of the thesis structure.

1.1 The Importance of Safety

Safety in both civilian and military aviation is one of the critical elements that must be integrated into an organisation's systems. The prevention of adverse events is paramount in aviation since safety assists an organisation to protect its people, safeguard assets and environment, improve operational efficiency, and enhance productivity (Ferguson & Nelson, 2014; Cusick et al., 2017). Nevertheless, safety constantly clashes with organisational objectives such as production or missions, since, generally, most organisations prioritise those objectives rather than safety (Reason, 1997; Wood, 2003). The inevitably constant conflict between the goals of safety and those of production or missions is one of the drivers that lead people to erroneous behaviour that subsequently can result in accidents (Reason, 1998). Ideally, organisations must manage safety proportionally with other business activities (Hopkins, 2005), as safety is a prerequisite for success in the aviation business, not a factor that prevents organisations from achieving their objectives (Cusick et al., 2017).
Safety is considered not only as one of the means of maintaining operational readiness, but also as a method of controlling cost (AFI, 2011; Wood, 2003). First, maintaining operational readiness means preserving all assets, which include personnel, equipment and facilities. This can be done by ensuring that jobs are performed safely. Any incident or accident that occurs will impede operational growth and subsequently will affect operational capability (AFI, 2011). Aviation accidents erode a military organisation's capabilities by reducing both readiness and the number of aircraft readily available. Sometimes entire fleets of aircraft are grounded during an accident investigation. Moreover, aviation accidents harm morale and may cost the lives of military personnel (DoD, 2006).

Second, safety as a method of controlling cost means that it enables an organisation to carry out its missions successfully while at the same time ensuring minimum damage to its equipment and injury to people (Wood, 2003). From an economic standpoint, the Australian Civil Aviation Safety Authority (CASA, 2006) argues that there are three kinds of costs associated with an incident or accident: direct costs, indirect costs, and industry/social costs. CASA (2006) defines direct costs as on-the-spot costs that mostly relate to physical damage. These includes the costs associated with rectifying, replacing or compensating for injuries, aircraft equipment and property damage. On the other hand, CASA (2006) defines indirect costs as costs other than direct costs that are sometimes hidden, not as obvious, and are often incurred later. Wood (2003) and CASA (2006) argue that indirect costs are usually higher than direct costs, and may even be double or triple the direct costs. Moreover, some organisations cannot survive the economic consequences of a major accident. Collectively, accidents and incidents that occur in the aviation industry cost companies billions of dollars in losses every year (Ferguson & Nelson, 2014). Third, the industry/social costs include loss to society of the productive capacity of the victims of aviation accidents, damage to aircraft, and family and community losses (CASA, 2006).
1.2 The Evolution of Aviation Safety

According to the International Civil Aviation Organisation (ICAO, 2013), the evolution of aviation safety can be divided into three different eras: the technical era, from the early 1900s until the late 1960s; the human factor era, from the beginning of the 1970s until the mid-1990s; and the organisational era, from the mid-1990s to the present day.

![Diagram showing the evolution of aviation safety](image)

Figure 1. The Evolution of Safety (Source: ICAO, 2013)

In the early years of aviation development, the aviation safety system was characterised by a fly-crash-fix-fly approach (Stolzer et al., 2008). With this approach, if an accident occurred, an investigation would be carried out to determine the cause of the accident. Generally, the report of the investigation would indicate only a single cause of the accident, and whether it was due to human factors, material, or weather. The cause of the accident was limited only to one factor, and it was known as the single-cause theory (Wood, 1997). Initially, most of the causes of accidents were related to technical factors or technological failures (ICAO, 2013) and this era is often referred to as the technical period (Wiegmann & Shappell, 2001).

The frequency of aircraft accidents gradually declined as a result of the improvement of aircraft technology in the 1950s (ICAO, 2013). In the early 1970s, while aircraft accidents...
due to engineering and mechanical deficiency decreased significantly, the accidents caused by human factors decreased at a much slower rate (Wiegmann & Shappell, 2001). Edwards (1985), as cited in Hawkins (1987), believes that human factors were "concerned to optimise the relationship between people and their activities by the systematic application of the human sciences, integrated within the framework of system engineering". Human factors include human-human interactions and their impact on systemic safety as well as the human-machine interface (Patankar & Sabin, 2010; ICAO, 2013). Individual characteristics, including attitudes, have been associated with individual accident rates (Hale, 2000). According to investigation reports, human factors contributed to as much as 80% of accidents in civil and military aviation (Wells, 1987; Wiegmann and Shappell, 2001a; Cusick et al., 2017). Consequently, since the human was blamed for being the main cause/factor of incidents or accidents, the studies on human factors focused on such issues as cockpit and maintenance resource management (Reason, 1997). Nonetheless, the focus of human factor science tended to be on the individual without considering other aspects such as organisational and operational contexts (ICAO, 2013); or in other words, analyses of the nature and causes of human errors have been based solely on the cognitive perspective (Wiegmann and Shappell, 2001a). Accordingly, the focus turned toward human and organisational factors since both must be taken into account when managing safety in a complex system (Reason, 1997).

From the mid-1990s to the present, the focus on safety has shifted to organisational considerations and the acknowledgment that accidents or serious incidents are caused not only by technical and human factors, but also by organisational factors (Patankar & Sabin, 2010; ICAO, 2013). Turner (1978) argued that disasters may arise because of a ‘socio-technical’ problem, implying the interaction of social, organisational and technical processes. Wood (1997) asserted that accidents occur due to a deficiency of human, technical and organisational factors that are interrelated, known as the ‘theory of multiple causations’. Furthermore, Turner
(1978) believed that disasters may occur due to people having insufficient knowledge, or from administrative causes, or from the combination of administrative and technical causes, or from the decisions made by management. Reason (1997) defined this phenomenon as organisational accidents in which accidents are a result of technological developments/innovations that significantly affect the relationship between systems and their human elements. In performing their tasks, the human elements or operators not only interact with the technology, but are also influenced by people and the particular culture that exist within an organisation (Wiegmann et al., 2004).

1.3 Research Context Overview

Considering the complex and interrelated factors that cause accidents and safety-related incidents, it is necessary for an organisation to find an effective method that employs a more proactive approach in order to prevent accidents and incidents. Recently, the proactive approach has become increasingly popular (Oster et al., 2013) as it provides the organisation with critical information enabling the identification of risks and other potential hazards before an accident or incident occurs. Subsequently, the organisation can take preventive measures to mitigate or eliminate those risks and hazards. The safety management system (SMS) that has been introduced and developed for the aviation industry over the last two decades is one system that uses an integrated proactive approach to safety.

An SMS is a powerful framework that can provide guidance for organisations on safety philosophy, methodologies and tools, thereby enabling organisations to better comprehend, develop and manage safety systems proactively (Stolzer et al., 2008). Since the introduction and implementations of SMSs in the early 2000s in the aviation industry, it has been acknowledged that the SMS is one of the crucial factors that help to reduce the number of aircraft accidents and incidents (Flouris and Kucukyilmaz, 2009). Oster et al. (2013) contended
that the global airline accident rate has decreased by 42 percent since 2000 with only one accident occurring now for every 1.6 million flights. Cusick et al. (2017) asserted that the passenger fatality rate in 2015 was one per 40 million, a fourfold improvement on the previous year.

As the introduction and the implementation of the SMS in civilian aviation have been recognised as having several advantages, military aviation has been attracted to adopting this new safety system. Many military organisations have started introducing and implementing the SMS to further improve their existing safety systems. It is expected that the implementation of SMS in military organisations will not only provide a means of effectively and efficiently managing safety systems, but will also enhance military operational capability and productivity while complying with regulations as mandated by the country’s health and safety laws (RAF, 2014).

Nonetheless, the implementation of an SMS will not guarantee that incidents or accidents will not occur. Hopkins (2005) argued that safety cannot be assured simply by introducing a safety management system; it is essential that an organisation has the right culture to make a safety system work. Furthermore, he contended that three out of four important aspects of an SMS - safety, management and system - cannot properly be implemented if an organisation does not possess a good safety culture. Reason (1998) asserted that a safety defence system consists of several factors, some of which are greatly influenced by an organisation's safety culture. According to Helmreich and Merritt (1998), safety culture itself is critically influenced by cultural factors.

Reports of the major accidents investigations and findings of safety culture studies advocate that cultural factors, national and organisational, may have contributed to the causes of accidents and have an impact on safety (Strauch, 2010; Hopkins, 2006; Li et al., 2007). Studies indicate that each culture, with its own unique characteristics, will have a different
effect on the promotion of a safety culture and the implementation of an SMS. However, there has been little research on how cultural factors influence safety. In particular, few studies have investigated the influence of cultural factors on the promotion of a safety culture and the implementation of an SMS in a military organisation. Moreover, there is scant research on the impacts of cultural factors on military organisational structure and safety systems. This study was intended to investigate and partially address challenges in the promotion of a safety culture and the implementation of the SMS from a cultural perspective. Furthermore, the purpose of this study was to obtain viewpoints from other cultures on the implementation of the SMS, especially since SMSs have been widely adopted by military organisations in many countries with cultures different from that where the SMS originated. Subsequently, this can be used as a means of evaluating the implementation of the safety program. Military aviation, to some extent, is different from civilian aviation. One of the significant differences is that military organisations do not recognise worker or trade union systems. Wiegmann et al. (2004) believed that union representatives play a critical role in ensuring safety and the organisational processes are acceptable and in accordance with the existing rules, regulations, and procedures. Since the military does not have a union system, this thesis will not investigate the effect of trade unions on safety systems in military organisations.

1.4 Research Objectives and Questions

This study began with the assumption that the cultural factors, national and organisational, have a critical impact on the implementation of the SMS and the promotion of a safety culture in Indonesian military organisations. It was assumed that the implementation of an SMS, which is mostly based on a Western management concept, cannot be optimised since it is likely that some of the SMS principles are not aligned with the existing culture in Indonesian military organisations. Aircraft accidents that occur every year could be used as an indicator of
incompatibility. Although the military organisation investigated in this study has been implementing the SMS for several years, the expected outcome, achieving zero accidents, has not been achieved. Understanding how the cultural phenomenon could have a profound impact on safety is important as this factor would not have been previously considered by authorities prior to adopting the SMS. Therefore, the objectives of this study were to investigate various elements of the current Indonesian national and military organisational cultures and identify the impacts of those cultures on the implementation of the SMS and safety. The main research question of this study is: **how do Indonesia’s national and military organisational cultures influence safety?**

1.5 **Research Significance**

There have been numerous safety research studies pertaining to both civilian and military aviation (Sherman et al., 1997; Helmreich and Merritt, 1998; Merritt, 2000; Gibbons et al., 2006; Evans et al., 2007; Oneto, 1999; Goodrum, 1999; Harris, 2000; Soeters and Boer, 2000; Stanley, 2000; Hernandez, 2001; Brittingham, 2006; Desai, 2006; Falconer, 2006; Adamshick, 2007; and Buttrey, 2010). The quantitative approach, comprising survey/questionnaires and content analysis, has been the dominant methodology used in safety culture studies. However, in terms of safety culture in military organisations, all studies have been conducted in developed countries: the USA, Australia, and the Netherlands. However, Guldenmund (2007) argued that self-administered questionnaires are less useful in organisational culture research because they are prone to measurement error and cannot distinguish between attitudes and perceptions. Antonsen (2009) asserted that a safety culture survey cannot assess the basic assumption of an organisational culture and leaves the findings open to possibly subjective interpretation by the researcher. According to Hopkins (2006), the survey method tends to focus more on the individual’s perception which might not coincide with what actually occurs;
thus, the results of a survey can be biased. Moreover, a survey question limits the researcher to describing dynamic processes within the organisation as many practices are too complex to be covered by questionnaires. As a result, a survey method captures only a relatively superficial description of an organisational culture (Hopkins, 2006). Furthermore, Batteau (2002) argued that the textbook models of management, used as the reference when constructing the questionnaires/survey that describe an ideal management for flight operation, are based on Western concepts of management.

There have been several qualitative safety research studies in other industries (Haukelid, 2008; Antonsen, 2009). However, research on the impact of national and military culture on aviation safety using the qualitative approach is quite scarce. A qualitative research design, encompassing multiple case studies, was adopted for this study in order to analyse, and acquire insights into, the contemporary cultures that exist within a military organisation and how those cultural factors impact on safety. Therefore, the significance of this study is the description and analysis it provides of the contemporary implementation of the SMS, in which cultural factors may inherently conflict with some of the SMS principles. Moreover, it is anticipated that this study will contribute to the safety culture research. In particular, this study has the capacity to provide grounded recommendations for the adoption of the SMS or other safety programs that are based on other cultures, in which the cultural factor can be used as an initial assessment to determine whether the newly-adopted program aligns with the organisational culture. Methodologically, this study demonstrates that the qualitative approach plays a critical role in examining the dynamic processes of an organisation – in particular, the way in which an organisation deals with and resolves its safety issues.
1.6 The Structure of the Thesis

This thesis consists of seven chapters. Chapter 1 provides a brief summary of the background of the study in addition to a discussion of the importance of safety, the evolution of aviation safety, an overview of the research context, the research objectives and questions, the significance of the research, and the structure of the thesis. Chapter 2 discusses military safety and in particular, the Indonesian military. Chapter 3 presents a literature review of culture in general and safety culture in particular, and the literature referenced to support the research questions. Chapter 4 discusses research designs, research methods, sample selection and sample description. The findings of the thesis are presented in Chapters 5 and 6. Chapter 7 concludes the thesis with recommendations, limitations, future research directions, and final remarks.
CHAPTER 2

MILITARY AND INDONESIAN CONTEXT

This chapter describes safety in a military context. The chapter begins with a discussion of safety in the military which started from the early utilisation of aircraft by the military, which is presented in section 2.1. Section 2.2 discusses the formation of the Indonesian Armed Forces, the objectives, and the current condition of the organisation. The discussion in section 2.2 also includes a description of the Indonesian Air Force, the safety system, the definition of accidents, and the Indonesian Air Force aircraft accidents statistics.

2.1 Military Context

The development of aircraft is closely related to military aviation since the utilisation of aircraft in World War I stimulated the advancement of aircraft technology. Military organisations recognised aviation’s potential a few years after the invention of the aeroplane and the military began to utilise aeroplanes for its purposes (Prince and Salas, 1993; Curley, 2012). Leaders from European countries supported their military by heavily investing and spending large sums on research and development of aircraft and engine industries in their respective countries (Curley, 2102). It was during World War I that the capabilities and the value of aviation were first demonstrated (Garber, 1963). During the early use of aeroplanes in World War I, military pilots only observed and photographed the actions of the enemy and then disseminated that information to their ground forces (Garber, 1963; Prince and Salas, 1993). Subsequently, the role of the aircraft significantly improved during World War I when aircraft were used not only for observing the enemy but also as powerful bombers and fast machine-gun-firing fighters (Garber, 1963). Warplanes demonstrated their usefulness as a military tool and became one of the essential forces (Prince & Salas, 1993; Kraus, 2008). Aircraft capabilities were greatly
improved; for example, speeds increased from 70 miles per hour to over 160 miles per hour and altitude increased from 10,000 feet to 20,000 feet (Garber, 1963). The significant improvement in aircraft design and performance during World War I not only provided support for the military to expand its aviation capabilities but also laid the foundation for the development of commercial aircraft (Prince & Salas, 1993).

Unfortunately, the improvement in military aircraft design and performance was not followed by an equivalent improvement in safety performance. The first fatality in aviation occurred in 1908 when one military observer was killed during a military demonstration flight (Cusick et al., 2017; Stolzer at al., 2008). After that, aircraft accidents continued to occur although aircraft technology had improved significantly. The first statistics on military aircraft accidents were recorded by the U. S. Army in 1921, showing that in a one-year period, 361 major accidents occurred in 77,000 hours of flight, equal to 467 accidents per 100,000 hours (Cusick et al., 2017). The very high rate of accidents continued and even worsened as the military accident rate during and after World War II was 170 pilots and aircraft per day; nonetheless, the military accepted those losses as the price of victory (Kerber, 2014).

Cusick et al. (2017, p. 3) defined military aviation as “use of aircraft for conducting aerial warfare and support operation”. The military of any country operates in an environment that differs from that of commercial aviation (Edkins, 2002; O’Connor et al., 2010). Flight operations in the military are more complex than commercial aviation as military air crew are required not only to execute all procedures that go with flying an aircraft but must also operate weapons and sensor systems at the same time (O’Connor et al., 2010). Moreover, the military accepts risky procedures which would not be tolerated any in other aviation domain (Edkins, 2002). The risky procedures are justified as the military can take every action that is required (the means) to achieve its objective (the ends - winning the war) (Lucas, 2016). In the past, it appeared that military personnel were willing to take risks and disregarded their best judgment
about the risk to benefit ratios (Kerber, 2014), or in other words, mission accomplishment was the number one priority for the military and safety came later (O’Connor et al., 2010). However, for modern armed forces, the core objective of the military is to inflict damage to life and property of the enemy while safely manoeuvring ‘live’ weapons from the home base to targets and returning to the home base (Falconer, 2005). It still emphasises that mission accomplishment is the primary concern of the military organisation; now, however, safety is inherently considered as a part of the success of the mission.

Internationally, the military has been striving to design its organisation so that it is able to achieve its objective while accomplishing the assigned missions in the safest possible way (Beeres et al., 2016). Advanced technology is one of the contributors to the improvement in military safety (Beeres et al., 2016; Oster et al., 2013). Moreover, Beeres et al. (2016) believe that advanced technology offers safety and security advantages. For example, the utilisation of unmanned aerial vehicles (UAV) in hostile environments enables the military to effectively and efficiently attack its enemy while at the same time minimising the number of human lives to be put at risk. In addition to advanced technology (such as improvement in aircraft, engines, and avionics), other factors that significantly contribute to the improvement of aviation safety include improved pilot training, advanced navigational aids and air traffic management, better understanding of weather phenomena and improved weather forecasting, and careful and thorough aircraft accident investigations (Oster et al., 2013).

Currently, the global military accident rate, which includes serious incident rate, has been dramatically declining and the military safety performance has significantly improved (Kerber, 2014). However, despite this improvement, civilian or commercial aviation has done much better in terms of its safety performance. O’Connor et al. (2010), claimed that a summary of six studies of military and civilian mishaps related to cockpit resource management (CRM) failures suggests that the military of any country has mishaps three times the number of those
occurring in commercial aviation. Prince and Salas (1993) and O’Connor et al. (2010) stated that the factors contributing to this discrepancy include the nature of the people, the task, and the type of organisation - whether military or civilian.

According to Lauber (1987), as cited in Prince and Salas (1993), there are several reasons that stimulated commercial airlines to develop safety programs in advance of the military, one of which is CRM training. First, research conducted by National Aeronautics and Space Administration (NASA) in 1970 identified the need for commercial aircrews to undertake training beyond technical flying skill. Second, there was tremendous public pressure on commercial aviation safety as there was a high rate of accidents that resulted in a high number of fatalities caused by human factors. While commercial aviation had reasons to improve their safety, the military had not yet recognised the need to do so. Prince and Salas (1993) argued that several factors had stalled any efforts by the military to improve their safety. First, the military conducted no significant safety research, especially research on cockpit crew interaction; nor did military accident statistics identify the problem of crew interaction in the cockpit. Second, a mishap involving military aircraft rarely attracted the interest of the public as such accidents usually involved only a few people, compared to commercial airlines accidents which hundreds of people may die. Hence, there was no public pressure on the military as the consequences of accidents are concerned only the military community. In addition, the military is an insulated organisation which cannot be investigated openly and published in a public forum (Falconer, 2005).

Even though the military does not receive pressure from the public, this does not mean that it is not interested in improving its safety performance. In fact, the military is not immune to the consequences of accidents. Most military organisations in the world have their own safety departments which are manned by highly trained and qualified personnel in order to improve the organisation’s safety. To this end, the military not only conducts safety research
but also thoroughly and carefully investigates every incident and accident that occurs within the organisation. Nonetheless, the results of the research and investigation are mostly disseminated and circulated only among their own military personnel. This is due to the secretive nature of the military which means that information is shared strictly among the agents concerned. Moreover, unlike the commercial airlines, the military does not have an obligation to share and publicise the report of an accident investigation. Therefore, it is rare to find a published report of military aircraft accidents, or if it is published, the report would have been censored and filtered in the interest of the military. Regarding safety research in military organisations, the majority of articles come from the armed forces of the United States and other Western countries. Most of the safety studies adopted a quantitative approach using surveys and questionnaires, which examined the US military organisations’ safety climate. The studies attempted to scrutinise how the organisation manages safety – by means of process auditing, reward system, quality assurance, risk management, and command and control (O’Connor et al., 2011). However, a study of the influence of the military system and organisational culture on safety has not been conducted. Consequently, the study of the impact of cultural factors on a military organisation will provide more insights on how those factors influence safety performance.

2.2 Indonesian Military

2.2.1 Indonesian Armed Forces

On 5 October 1945, the People's Security Forces (BKR) - later renamed *Tentara Nasional Indonesia* (TNI) or the Indonesian national military - was established with the main initial task of defending the Republic's independence (Rabasa & Haseman, 2002). Since then, TNI's roles and tasks have changed significantly. As Gindarsah (2014) argued a complex and dynamic strategic environment created new challenges or threats not only for Indonesia’s domestic
security problem, but also regarding the regional security issue. Indonesia's main threat perceptions are dominated by internal rather than external concerns (Sukma & Prasetyono, 2003; Sukma, 2010; Schreer, 2013). Sukma (2010) classified three security threats facing Indonesia:

- internal securities that include armed insurgencies, communal and religious violence and terrorism;
- non-traditional security and trans-national security problems which comprise natural disaster and maritime-based threats (piracy, illegal fishing, illegal logging, drug trafficking and human trafficking);
- external security problems that consist of sovereignty and territorial disputes, border security and regional uncertainty.

To address those security challenges, Indonesia established a national security strategy and enacted two key laws on national defence, Act Number 3/2002 on State Defence and Act Number 34/2004 on Indonesia's National Defence Force. According to Act Number 3/2002 on State Defence (Article 10), the TNI is "a defence instrument of the unitary Republic of Indonesia" that "consists of army, navy and air force", and has four main functions:

- to uphold national sovereignty and maintain the state's territorial integrity;
- to safeguard the safety of the people and the nation;
- to undertake military operations other than war; and
- to participate actively in international and regional peacekeeping missions.

Further, the TNI's roles and main responsibilities are also stipulated in Act Number 34/2004 on Indonesia's National Defence Force. Act No. 34/2004 specifies that the TNI’s tasks are to "uphold state sovereignty, maintain territorial integrity and protect national entities against internal and external threats" that are conducted through "conventional military operations and military operations other than wars". Since the TNI is the main component of a
national defence that is mandated by the Constitution to accomplish its tasks, the TNI is required to fulfil five strategic objectives that are stipulated in the Indonesia Defence White Paper, issued by Ministry of Defence in 2008. It is required to be:

- Able to deter all forms of threats that jeopardize Indonesia's sovereignty, territorial integrity, and safety of the people;
- Capable of engaging in war against foreign military aggression;
- Able to resolve any military threat that undermines the existence and interests of Indonesia;
- Capable of dealing with non-military threats that have an adverse impact on Indonesia's sovereignty, territorial integrity, and safety of the people;
- Able to contribute to the establishment of international peace and regional stability.

In order to achieve those capabilities and conduct its tasks effectively and efficiently, the Indonesian military needs to strengthen its military capability which can be achieved by building more appropriate forces, ensuring professionalism of the forces in accordance with their roles, restructuring a proper defence posture and organization, and performing reasonable defence procurement (Widjajanto, 2004). Building ideal defence forces that can achieve those defence objectives effectively requires the allocation of national resources which includes defence funding. Unfortunately, the defence budget is one of the current fundamental constraints upon attempts to professionalise and improve Indonesian military capability (Sukma, 2010; Sebastian and Gindarsah, 2013).

According to Index Mundi and the World Bank, Indonesia's military expenditure has increased each year since 1988, and the highest value (% of GDP) was 0.99 in 2003, whereas the lowest was 0.48 in 2001. The Indonesian government announced a 9% increase in the 2014 defence budget that is equal to about 0.9% of GDP (Grevatt, 2013). Sebastian and Gindarsah (2013) contended that even though the size of the defence budget increased significantly after
the 1998 fall of the Soeharto government, the TNI still suffers from a "defence-economic gap" because the actual defence budget received is less than the proposal submitted.

Moreover, Haroen (2013) argued that an increase in military expenditure is not sufficient to boost military power since the defence budget is broken down into the five organizational units (the Defence Ministry, TNI Headquarters, Army, Navy, and Air Force) and most of the defence budget will go on personnel expenditures (salaries, allowances, and soldier welfare). Moreover, he also claimed that the budget allocations that TNI received are just sufficient to fulfil only some of the basic requirements of the TNI to coincide with the principal logistical standards outlined in the table of organization equipment. The budget allocations are still not adequate to boost Indonesia's military capability as Indonesian territory, geographically, is vast, and it requires modern and sophisticated equipment to protect and maintain its sovereignty. However, Indonesia has a shortage of such equipment as much of its military equipment and weaponry are obsolete and need replacement (Haroen, 2013).

Indonesia recognises the fundamental financial management issue, and in the last seven years or so, the Indonesia government has issued a defence development plan that is reflected in Law No. 17/2007 on Long-Term Development Plan 2005-2025 (Sukma, 2010).
Subsequently, Sukma (2010) stated that the aim of the improvement of the defence capability in the period of 2005-2019 is to achieve "a minimum essential force" defined as "a force level that can guarantee the attainment of immediate strategic defence interests, with the procurement priority given to the improvement of minimum defence strength and the replacement of out-dated main weapon system/equipment" (PP no 7, 2008). Furthermore, the priority of the defence capability improvement is to modernise navy and air force weaponry systems as well as strengthen the army's capability. The Indonesian navy is focusing on the development of a "green-water" navy through the acquisition of modern frigates and corvettes equipped with weaponry systems; the Indonesian air force plans to modernise its air combat and tactical airlift aircraft, and the Indonesian army's priority is to have a more modern, agile and deployable force (Schreer, 2013).

For the Indonesian air force, the replacement of its out-dated and ageing equipment and weaponry system with more contemporary and sophisticated equipment is a positive indication of its desire to improve its capability. Nevertheless, the efforts to improve appear to be futile given the number of aircraft incidents and accidents that occur every year. Those incidents and accidents not only complicate and exacerbate the existing issue in executing the defence development plan, but also delay and decrease the growth and readiness of the Indonesian Air Force. The operational readiness is greatly reduced when an accident occurs on a certain type of aircraft. This is because the organisation is required to ground the entire fleet of that particular aircraft type for a certain period of time. Therefore, in order to maintain and improve its capability and readiness, it is important that the Indonesian Air Force take considered actions to prevent future incidents or accidents.
2.2.2 Indonesian Air Force

Almost one year after the establishment of the People's Security Forces (BKR) on 9 April 1946, as a result of evolution from the aviation division of the BKR, *Tentara Nasional Indonesia Angkatan Udara* (TNI AU) or the Indonesian Air Force (IDAF) was established, and became a separate service. The newly established Indonesian Air Force was made responsible for taking over all existing Dutch equipment and airfields as well as defending Indonesian airspace (Rabasa and Haseman, 2002). Since its establishment, the IDAF has been striving to become a professional military organisation in order to accomplish its mandated tasks as specified by the constitution.

Currently, the IDAF, manned by 30,100 personnel, consists of two Air Force Operational Commands (Komando Operasi Angkatan Udara / Koopsau), Operational Command No. 1 (Koopsau 1) that is located in Jakarta and Operational Command No. 2 (Koopsau 2) based in Makasar, Sulawesi (TNI AU, 2016; IISS, 2015; Sukma, 2010; Rabasa and Haseman, 2002). In addition, the IDAF also has one Air Force Training Command (Komando Pendidikan TNI AU / Kodikau) that is located in Jakarta in which one of whose main tasks is to provide pilot training. Operational Command No. 1 is responsible for operations that cover the Western part of Indonesia and supervises nineteen air bases, whereas Operational Command No. 2 is responsible for operations that cover the Eastern part of the country and manages twenty air bases (TNI AU, 2016). Both Operations Commands and training commands carry out various missions that include training for and conducting military operations. Since Indonesia is not in a war zone, most of the missions carried out by the IDAF are military operations other than war. These include humanitarian aid operations and disaster relief operations such as the tsunami relief operations in Aceh in 2004, and earthquake relief operations in Yogyakarta and West Papua. The disaster relief operations are carried out not
only domestically but also regionally in, for example, the Philippines and other South East Asian countries.

For the carrying out of its duties, the IDAF is equipped with combat squadrons, transport squadrons, maritime squadrons, helicopter squadrons and training squadrons (Sukma, 2010). The table below shows the IDAF's aircraft fleets based on the IISS Military Balance 2015 and Flight Global World Air Force 2015.

Table 1. Aircraft Fleet

<table>
<thead>
<tr>
<th>No</th>
<th>Role</th>
<th>Aircraft Type</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Fighter</td>
<td>F-5E/F Tiger II</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td></td>
<td>F-16A/B/C/D Fighting Falcon</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Su-27SK/ SKM Flanker</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Su-30MK/MK2 Flanker</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Hawk Mk109/Mk209</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td></td>
<td>T-50i Golden Eagle</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td></td>
<td>EMB-314 (A-29) Super Tucano</td>
<td>8</td>
</tr>
<tr>
<td>2</td>
<td>Maritime Patrol</td>
<td>B-737-200</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CN-235M-220 MPA</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>Tanker / Transport</td>
<td>C-130B/KC-130 B Hercules</td>
<td>5</td>
</tr>
<tr>
<td>4</td>
<td>Transport</td>
<td>C-130H/H-30 Hercules; L-100-30</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td></td>
<td>C-212 Aviocar</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CN-235M-110; C-295M</td>
<td>5,7</td>
</tr>
<tr>
<td></td>
<td></td>
<td>VIP Squadron (B-737-200, C-130H/H-30 Hercules; L-100-30, F-27-400 M Troopship, F-28-1000/3000, AS332L Super Puma, SA330SM Puma (NAS300SM))</td>
<td>1,1,1,3,10,1</td>
</tr>
<tr>
<td>5</td>
<td>Training</td>
<td>Grob 120TP</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td></td>
<td>KT-1B</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>Aircraft Type</td>
<td>Number</td>
<td></td>
</tr>
<tr>
<td>----</td>
<td>---------------------------------------</td>
<td>--------</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>T-34C Turbo Mentor</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SF-260M, SF260W Warrior</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>17</strong></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Transport Helicopter</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>AS332L Super Puma (NAS332L)</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SA330J/L Puma (NAS300J/L)</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>EC120B Colibri</td>
<td>12</td>
<td></td>
</tr>
</tbody>
</table>


Table 1 provides an overview of the diversity and size of the aircraft that are operated by the IDAF. The table also depicts the number of each aircraft type and aircraft role.

### 2.2.3 IDAF's Safety System

The IDAF recognises safety as one of the fundamental factors needed to successfully achieve its mandated tasks. The importance of safety is reflected in the IDAF's ongoing safety program and the introduction and implementation of Aviation Safety Management System (ASMS). In addition, the IDAF has also published a safety manual handbook that aims to provide safety guidance for all its personnel, so that the flying operations and the ground works can be executed safely. As with many other safety documents, such as the ICAO Safety Management Manual (SMM) (2013) and the Australian Defence Aviation Safety Program Manual (2015), *Dinas Keselamatan Terbang and Kerja Angkatan Udara* (Dislambangjaau, 2011) or Indonesian Air Force work and flight safety agency has published the IDAF's safety manual handbook which contains general information concerning the fundamentals of safety management. These fundamentals of safety management comprise several core activities to prevent incidents and accidents. They include: safety lectures and counselling, work and flight safety campaigns, safety briefings, safety meetings, safety surveys, hazard identification, risk
assessment, safety reporting system, investigation, education and training, collaborative safety initiative and safety assurance.

2.2.4 Definition of Accident

According to Dislambangjaau’s safety manual (2011), accidents and incidents have been separated into three categories (mainly adopted from ICAO Annex 13): accident, serious incident and incident. The following is the English translation of the accident definitions for each category (Dislambangjaau, 2011, p. 8):

- An accident is an occurrence associated with the operation of an aircraft that takes place between the times any person boards the aircraft with the intention of flight until such time as all such persons have disembarked, in which:
  
  a) A person dies as a result of being in the aircraft, direct contact with any part of the aircraft, except when the death or the serious injuries are from natural causes, self-inflicted or inflicted by other persons, or when the injuries are to stowaways hiding outside the areas normally available to the passengers and crew; or
  
  b) The aircraft is destroyed or sustains damage or structural failure which is beyond economic repair:
  
  c) The aircraft is missing so it cannot complete its task.

- A serious incident is an occurrence associated with the operation of an aircraft whether on the ground or in flight which circumstances affect and threaten the safety of people, aircraft and materials and indicating that an accident nearly occurred and resulted in:

  a) The aircraft sustains damage however it can be repaired.
  
  b) Crews or passengers suffer serious injury and or unharmed.
- Incident is an occurrence associated with the operation of an aircraft whether on
ground or in flight which circumstances affect and reduce the level of safety of people,
aircraft and materials. For instance:

a) The utilisation of the aircraft that is not in accordance with standard
operating procedures and other safety related procedures.

b) The aircraft sustains minor damage or experiences technical problem but
manages to land.

c) The aircraft lands safely but is declared no longer airworthy which can cause
accident.

d) Crew or passengers suffer a minor injury and or are unharmed.

2.2.5 Aircraft Accident

As stated earlier, the IDAF has been striving to maintain its capability and operational
readiness. The organisation has attempted to prevent accidents by having an ongoing safety
system in place, introducing and implementing SMS, and promoting a safety culture by the
encouraging its personnel to ensure safety behaviour. However, aircraft accidents continue to
occur. During the period between 2000 and 2016, more than thirty aircraft accidents occurred.

In 2016, two aircraft accidents occurred in which more than fifteen people died. The previous
year, 2015, four aircraft accidents occurred resulting in hundreds of fatalities and the
destruction of five aircraft. One of the accidents was the crash of a C-130 Hercules that
occurred in Medan, North Sumatera, which killed more than one hundred passengers and all
crew. The 2015 C-130 Hercules crash was similar to the 2009 C-130 Hercules crash that
occurred in Magetan, East Java, which also caused more than one hundred fatalities. In 2009,
one of the worst accident years, more than one hundred people were killed as a result of six
IDAF aircraft accidents, adding to the already long listed of recoded IDAF accidents.
Figure 3 shows accident frequency per year which fluctuates over time. The highest numbers of aircraft accidents were in 2000 and 2009, with six aircraft accidents respectively. From the figure above, it is obvious that the organisation has been unable to prevent recurrences for the period between 2000 and 2016. Although some people believe that the number of accidents cannot be used to determine the safety level of an organisation, it is obvious that the organisation’s safety defence system has been breached, allowing the accidents to occur.

2.3 Summary

Although the military have played an important role in the development of aircraft, the safety performance of the military is not better than that of commercial aviation. The absence of public pressure and no significant safety research effort are two factors that may retard the improvement of military safety performance. Although there are numerous studies on safety in military organisations, the influence of cultural factors on military safety has not been examined.

Aircraft accidents that have occurred in the Indonesian Air Force have not only had significant adverse impacts, but have also created another challenge for the organisation.
Considering the long and complex processes associated with the death of the crew which requires replacement of personnel, and the replacement of the damaged aircraft and supporting equipment, as well as the existing issue of financial management, aircraft accidents complicate and aggravate the safety issue within the military organisation.
CHAPTER 3

LITERATURE REVIEW

3.1 Introduction

This chapter reviews the relevant literature pertaining to culture, national culture, organisational culture and safety culture. The chapter begins with a discussion of culture which is presented in section 3.2. Section 3.3 examines national culture and elaborates on the uniqueness of Indonesian national culture. Section 3.4 presents a discussion of organisational culture.

A discussion of military organisational culture is presented in section 3.5. Section 3.6 describes safety culture and consists of several subsections: 3.6.1 discusses Reason’s defence in depth; subsection 3.6.2 examines Safety Management System (SMS); subsection 3.6.3 presents a discussion of safety culture, and subsection 3.6.4 shows dimensions of safety assessment. The conceptual framework is presented in section 3.7. This section describes the relationship between SMS and safety culture. The chapter concludes with the summary presented in section 3.8.

3.2 Culture

Although there has been an abundance of research on culture, there has been no consensual definition of the term ‘culture’, and various definitions of it can be found in the scientific literature. According to Baldwin et al. (2006), there are more than 300 definitions of culture, double the number compiled and analysed by Kroeber and Kluckhohn in 1952. Many scholars have discussed, analysed, and defined culture in many ways and from different perspectives. For instance, while Kluckhohn (as cited in Baldwin et al., 2006, p.8-9) stated that “culture
consists of patterns, explicit and implicit, of and for behaviour acquired and transmitted by symbols, constituting the distinctive achievements of human groups, including their embodiments in artefacts; the essential core of culture consists of traditional (i.e. historically derived and selected) ideas and especially their attached values; culture systems may, on the one hand, be considered as product of action, on the other hand as conditioning elements of further action”, Schwartz (2006, p. 138) viewed culture as “the rich complex of meanings, beliefs, practices, symbols, norms, and values prevalent among people in a society”. These are just two of numerous definitions of culture that have been proposed by scholars in the past.

The various definitions of culture have emerged as a result of several factors such as the academic discipline from where they originate (Flouris & Kucukyilmaz, 2009; Baldwin et al., 2006; Sewell, 2005; Helmreich & Merritt, 1998; Trice & Beyer, 1993) and the different usages of the word (Baldwin et al., 2006; Sewell, 2005; Avruch, 1998). Sewell (2005) argued that the word ‘culture’ has two different usages. First, culture is utilised to define a category or aspect of social life that describes the complex reality of human existence. Second, culture can be defined as a concrete and bounded world of beliefs and practices. In this view, culture is assumed as comprising those characteristics that belong to society or a group, and it can be used to differentiate one culture from another. On the other hand, Avruch (1998) claimed that the diverse perspectives on the concept of culture might be caused by three different usages of the term. First, culture is defined as a special intellectual or artistic endeavour or products and only certain social group has culture. Second, culture refers to a quality possessed by all people in all social groups, which means that all people have a culture that they acquire by virtue of their membership of some social group. Third, culture refers to the uniqueness of the many and varied cultures of different people or societies. The different usages of the word have led to multiple meanings, and it can be interpreted as a concept to assist people in solving everyday problems, as a means of describing some behaviour, or as a topic of academic discussion.
(Baldwin et al., 2006). Also, Spencer-Oatey (2012) believes that the debate regarding culture is not merely conceptual or semantic, but also includes all of the usages and understandings to which it has become attached, or that can be attached to it, as well as different political or ideological agendas.

Researchers’ approaches, which include each researcher’s preferred methodology and view of the world, when conducting cultural study, also complicate the debate regarding culture (Martin, 2002; Hatch, 1997; Ogbonna, 1992; Smircich, 1983). According to Morris et al. (1999), there are two long-standing approaches to culture: the etic and emic perspectives. The objectivist approach, known as the etic (outsider) research (Martin, 2002), means that researchers act as independent observers who observe and analyse the phenomenon of interest from the outside (Hatch, 1997). Martin (2002) elaborates that in an etic research (quantitative or qualitative), researchers develop categories and questions based on prior research and theory when they investigate a particular topic of interest. Subsequently, conceptual categories are imposed by the researchers rather than instigated by members of the group that is being studied. As a result, the opportunity to discover other categories is difficult since the researchers are confined to the selected categories. On the other hand, the subjectivist approach of symbolic-interpretivists, also known as emic (insider) research (Martin, 2002), requires researchers to disclose a phenomenon of interest by interpreting the meaning of the phenomenon from the insiders’ experiences and perspectives and how they construct their worlds (Hatch, 1997). Anthropologists refer to the subjectivist approach of symbolic-interpretivist as the native view (Hatch, 1997; Morris et al., 1999). In an emic research, researchers are encouraged to perceive, think, and feel like a native, or make a “translation” from the native point of view (Geertz, 1983), as well as avoiding bias by making comparisons with other civilisations, especially the researchers’ own (Martin, 2002). Table 2 below is a summary of the conceptual assumptions of the emic and etic perspectives and associated methods proposed by Morris et al. (1999).
<table>
<thead>
<tr>
<th>Features</th>
<th>Emic / Inside View</th>
<th>Etic / Outside View</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Defining assumptions and goals</strong></td>
<td>Behaviour describe as seen from the perspective of cultural insiders, in construct drawing from their self-understandings.</td>
<td>Behaviour describe from a vantage external to the culture, in construct that apply equally well to other cultures.</td>
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Source: Morris et al. (1999) (*The original word, justice, has been replaced by safety).
In addition, Martin (2002) and Schein (2009) argued that one of the factors that creates disagreement among cultural scholars is the purpose of the cultural study. On the one hand, the first group believes that the purpose of the study is to look for generalisation or general traits. Hence, the study identifies the causes of a phenomenon and the result of the study can be used, to some extent, to predict effects that will occur in the future. This group believes that questionnaires and surveys can be used to measure abstract universal dimensions of culture (Schein, 2009). On the other hand, the second group contends that every culture is different and unique; thus, the study looks at general cultural processes (Schein, 2009). Geertz (1973, p. 25) argued, "The essential task of theory building here is not to codify abstract regularities but to make a thick description, not to generalise across cases but to generalise within them". Martin (2002) contended that thick description means providing an in-depth and richly detailed account of one culture that includes: interpreting several aspects of a group such as structures, rituals, formal policies, and practices, as well as comprehensively describing a work place. It also enables researchers to recognise the relationships among the various aspects of cultural manifestations since researchers focus only on examining one or several cultural contexts. Schein (2004) maintains that an in-depth understanding of a culture can be acquired only through a discussion with members of cultural groups and interviews with certain techniques and goals, such as those of a clinical psychologist. In contrast, Martin (2002) believes that it is difficult to gain an in-depth understanding of the relationships among the various cultural manifestations when quantitative measures are used, and random sampling procedures and large sample sizes are employed.

Despite all the different perspectives mentioned above, the core components of culture that prevail in the literature are beliefs, assumptions, and values (Sackmann, 1992). Brislin (2006) contended that culture comprises assumptions, values and ideals about life that are widely shared by people and used as guidance for a particular behaviour. Schein (2004)
asserted that culture is regarded as a character or personality of a group that forces members of the group to engage in certain kinds of behaviour. Geertz (1973) believed that cultural programs are one of the critical factors that individuals require for ordering their behaviour. Every individual desperately requires culture patterns; otherwise individuals’ behaviour would be unmanageable, and their experiences would be shapeless.

Each society has its own culture that is believed to be the total way of life of people within the group (Kluckhohn, 1949). Thus, if one method works in one culture, there will be no guarantee that it will also work in another. The methods used in approaching, addressing, and resolving problems distinguish one culture from another (Gutterman 2010; Schwartz, 2006; Trompenaars and Hampden-Turner, 1997). The ways by which people deal with problems are varied and depend upon their cultural value orientations (Gutterman 2010; Schwartz, 2006). Trompenaars and Hampden-Turner (1997) believe that there is no one best method of managing/organising that can work for all societies because each society understands and interprets problems differently.

Culture is human-made and is continually generated and established by people’s interactions with others (Schein, 2004; Trompenaars and Hampden-Turner, 1997). Kluckhohn (1949) and Avruch (1998) asserted that culture is something learned or created by individuals themselves or socially passed on to them by ancestors or contemporaries. Each specific culture that has survived will become a kind of blueprint for all life's activities. Since culture has demonstrated that it is able to overcome and provide an appropriate solution to any problem, it will be disseminated to younger generations or newcomers as the distinctive way of life for a certain group of individuals. The distinctive way of life or culture emerges from the process of people coping with uncertainties and the result of the process becomes, to some degree, guidance or order in social life (Trice & Beyer, 1993). Subsequently, the culture will become institutionalised in the group, and it is difficult to change (Guldenmund, 2010; Kharbanda and
Stallworthy, 1991; Kluckhohn, 1949). In this sense, it is aligned with Geertz’s (1973) view of culture as a set of control mechanisms for the governing of behaviour, not as complexes of concrete behaviour patterns. This view is based on the assumption that human thought is fundamentally both social and public. Important symbols such as words, gestures, drawings, mechanical devices, musical sounds and natural objects are utilised to impose meaning upon experience. These symbols already exist when an individual is born and will remain or change as there will be some additions, subtractions, or alterations to those symbols. The existence and continuity of most of any culture do not depend upon the lives of any particular person or persons in that group (Kluckhohn and Mowrer, 1944). Since culture is deeply rooted in the society and has been transmitted to younger generations, it will continue to survive even though some of the most influential people in the society have gone or passed away. However, culture must have a certain generality and universal applicability in order for it to be maximally effective and useful to succeeding generations (Spencer-Oatey, 2012; Kluckhohn and Mowrer, 1944).

Even though culture is difficult to change, it is subject to gradual change (Spencer-Oatey, 2012) as it is dynamic and not static (Trice and Beyer, 1993). Spencer-Oatey (2012) argued that change, to some degree, is a constant feature of all cultures. Several factors that can change culture include: individuals’ understanding and interpretation regarding their own culture which differs from one person to another; the nature of symbolic communication of culture create various perspectives among the member of a group; and new culture brought by new group members will have some degree of influence on the existing group culture (Trice and Beyer, 1993). Moreover, Spencer-Oatey (2012) pointed out that the introduction of new thoughts, norms or material items, called cultural innovation, introduced into a culture are the results of borrowing from other cultures and the process is known as cultural diffusion. Cultural diffusion is a selective process, and items will be borrowed from another culture if: 1) the
existing item is less superior to the borrowed item; 2) the borrowed item is consistent with existing cultural patterns; 3) it is understandable; 4) the borrowed item provides benefits to a relatively large number of people; 5) the borrowed item can be tested on an experimental basis (Spencer-Oatey, 2012).

Culture can also be regarded as a way of thinking, feeling, and believing that can be called “mental” activity, which produces intangible products and tangible products (Kluckhohn, 1949). The intangible products include the speech, gestures, activities, and overt behaviour of people, while tangible products are tools, houses, and cornfields. Those observable intangible and tangible products are the manifestation of the covert culture (Kluckhohn & Hoebel, 1943). Kluckhohn and Hoebel (1943) defined the covert culture as a sector of the culture of which the members of the society or group are unaware or minimally aware and can be called the unconscious assumptions or “cultural configurations” that act as the implicit or suppressed premises which tend to be characteristics of members of a certain group. Schein (2004) defined the concept of culture as a phenomenon that lies beneath the surface that is invisible but has a powerful impact of which people are unaware. As a concept, culture is an abstraction; however, its behavioural and attitudinal consequences can be seen and are concrete (Schein, 2004).

Several scholars (Taylor, 2010; Schein, 2004; Schneider and Barsoux, 2003; Guldenmund, 2000; Trompenaars and Hampden-Turner, 1997; Hofstede, 1991) have argued that culture consists of a core surrounded by one or more layers. The core is the driver of the culture to project itself progressively onto the outer layers. The further the location of a layer from the core, the more it becomes easier to observe; nonetheless, it is more difficult to interpret the relationship between the layer and the core (Guldenmund, 2010). The concrete behavioural and attitudinal consequences are the observable reality that functions as the manifestations of culture. These manifestations of culture are considered as the outer layer of culture and can be
observed in the forms of food, language, buildings, monuments, houses, shrines, market, fashions, agriculture, and art (Trompenaars and Hampden-Turner, 1997). However, culture cannot be understood by studying only the outer layer because it does not demonstrate the core of the culture that is often hidden (Guldenmund, 2010).

Taking into account all the different perspectives discussed above, this study considers that each society has its own unique culture. This study has taken Geertz’s (1973) view of culture as a set of control mechanisms for the governing of behaviour which is manifested as important symbols such as words, gestures, drawings, mechanical devices, musical sounds and natural objects. Although a cultural study using a quantitative approach has some shortcomings, it can still provide some insights (Schein, 2009). Nonetheless, this study adopted the subjectivist approach of symbolic-interpretivism, also known as emic (insider) research, in order to not only capture the uniqueness of culture, but also to gain an in-depth understanding of the relationships among the various cultural manifestations. Furthermore, various techniques such as interview, observation, and documents analysis were utilised to gather rich data and to acquire an in-depth understanding of a culture (this will be discussed in more detail in chapter 4).

3.3 National Culture

According to Schwartz (2006), the cultural values orientation can be used to identify dimensions that differentiate one culture from another. Dimensions are developed from the core of the culture that is used to explore and differentiate one culture from another (Schneider and Barsoux, 2003). Values are defined as "conceptions of the desirable that guide the way social actors (e.g. organisational leaders, policy-makers, individual persons) select actions, evaluate people and events and explain their actions and evaluations. Values are trans-situational criteria or goals, ordered by importance as guiding principles in life" (Schwartz,
1999, p. 24). Moreover, people within a society share ideas about what is good, right and desirable which are the representations of cultural values. These cultural values are the fundamental norms that guide people in terms of what is appropriate when dealing with various situations.

Based on the cultural value dimensions, Schwartz (2006, 1999) conducted a study to compare national cultures. In his study, he proposed three cultural value dimensions comprising seven value orientations. The seven value orientations are derived from his study of individual differences in values priorities that have impacts on attitudes and behaviour. Initially, the study was conducted by analysing data from 49 countries in 1999, and in 2006 another study was conducted by analysing data from 73 countries. Conceptual and empirical comparisons of cultural value orientation were utilised to produce a worldwide map of national cultures and further, to identify cultural regions.

To distinguish one culture from another, Schwartz is one of the scholars who developed dimensions that are used to identify the ways in which society responds to uncertainties. Many dimensions have been proposed in the past since each scholar has his/her own dimensions that are sometimes different, sometimes similar, and sometimes overlapping (Schwartz, 2006). Inglehart and Baker (2000) proposed only two dimensions while, other scholars have proposed several dimensions ranging in number from two to nine (detailed discussions of the proposed cultural value dimensions are presented in Schwartz, 2006; GLOBE project, 2004; Hofstede, 2001, 1991; Inglehart & Baker, 2000; Trompenaars & Hampden-Turner, 1997). Since there is no consensus among scholars in regard to dimensions, and there is debate on the issue (for instance Woodside, Hsu, & Marshall, 2011; Baskerville-Moley, 2005; Baskerville, 2003; Hofstede, 2003; Hofstede, 1997; Hampden-Turner and Trompenaars, 1997; Hofstede, 1996), a few scholars (Schneider and Barsoux, 2003; Nardon and Steers, 2006; Maleki and de Jong, 2014) have attempted to synthesise the available dimensions and proposed sixteen, five, and
nine dimensions accordingly. Although there has not been any consensus in regard to dimensions, Baskerville (2003) and Myers and Tan (2003) point out that many areas such as psychology, behavioural science, organisational studies, management, accounting, and IT have used those dimensions to fulfil a particular need in the areas, and many of them have utilised Hofstede’s work.

According to Baskerville-Moley (2005) and Bakerville (2003), there are deficiencies in Hofstede’s work, which include: nations are not the best units for examining culture, culture should not be measured through surveys, entire national culture cannot be recognised by studying subsidiaries of one company, five dimensions are not sufficient, and the IBM data are out of date. Woodside et al. (2011) argued that studying culture at the national level will raise some potential issues. First, there are many levels of culture (sub-cultures) within national cultures as there are many ethnicities, genders, classes, and ages within a nation. Second, within the nation, people belong to different cultures at one time which it will complicate attempts to differentiate them. Third, studying national culture means stereotyping all the people who live in that country, and this can be misleading. Fourth, studying national culture can potentially ignore other important values that exist across nations.

Whereas some scholars believe that there is no such thing as national culture, others argue that national culture does exist, and it provides valuable information. Schneider and Barsoux (2003) argued that despite the world getting smaller due to modernisation and globalisation, people still try to hold and maintain their own identities. On the surface, it seems that many people in the world have begun to share and exchange the same ways of life. However, what is seen is the outer layer of culture which does not demonstrate the core culture of one society or nation. Moreover, they contend that it has been shown that the applications of the management practices (i.e. a set of principles and techniques), which are claimed to be universally applied, have a different degree of success between one place to another. One of
the reasons for the different outcomes is that the management practices are not fully aligned with the local culture. Thus, it is necessary to modify the management practices to suit the local situation. Schwartz (2006) acknowledges that there is rarely a country with homogeneous societies; nonetheless, based on the findings of his survey, there is some similarity of cultural orientations within countries. Therefore, the country can be used as a cultural unit. Furthermore, he emphasises that when comparing culture at the national level, it is critical to use the same samples' backgrounds. Using latest World Values Survey data, Minkov and Hofstede (2012, p. 1) claim that “299 in-country regions from 28 countries in East and Southeast Asia, sub-Saharan Africa, Latin America, and the Anglo world overwhelmingly cluster along national lines on basic cultural values, cross-border intermixtures being relatively rare”. Results of the study demonstrate that even neighbouring countries such as Indonesia and Malaysia, or Guatemala and Mexico, which share various traditions, religions, ethnic groups, official languages, and historical experiences, show little similarity in their basic cultural values since in-country regions tend to group along national lines when basic cultural values are clustered (Minkov and Hofstede, 2012). Another study that supports the existence of national culture was conducted by Pagell et al. (2005), whose findings confirm that some or all of the cultural elements of the countries within the same regions have significant differences.

In the field of aviation safety, the importance of national culture has been discussed in several types of research (e.g. Soeters and Boer, 2000; Merritt, 2000; Helmreich and Merritt, 1998; Sherman et al., 1997). Most of the research has been exclusively based on the Hofstede model of culture, and the results show that personnel attitudes and values, to some extent, have been influenced by their respective national cultures. Nevertheless, in addition to Baskerville (2003), Myers and Tan (2003), and Baskerville-Moley’s (2005) concerns with respect to Hofstede’s work, Helmreich and Merritt (1998) argued that there are some incomplete findings with large-scale studies. For instance, the motivations underlying behaviours and the true
uniqueness of national culture cannot be captured by these studies. Furthermore, Helmreich and Merritt (1998) contend that there is no one national culture that is superior to another and that every national culture has its weaknesses and strengths in terms of influencing aviation safety.

In addition, Martin (2002) classifies Hofstede and other cultural scholars who propose limited cultural dimensions as etic cultural research since they impose the conceptual categories on the members of the cultural groups who are being studied. The limited cultural dimensions that are proposed by those scholars and the use of quantitative measures produce several disadvantages for researchers, which include: constraining researchers to obtain other categories since they are confined to those cultural dimensions; difficulty of acquiring an in-depth understanding of the relationships among the various cultural manifestations as it prevents an in-depth understanding of a culture (thin descriptions); and stereotyping that creates difficulties in identifying the uniqueness of a culture which can have different impacts on the implementation of a program.

For the purpose of this study, the culture at the national level does exist although most countries comprise heterogeneous societies - particularly large multi-ethnics countries such as Indonesia. In addition to the findings of cultural studies at national level which revealed that there is a similarity between cultural value orientations within countries, Havold (2007) posited that the values and beliefs underpinning national cultures influence individual behaviour through the values and beliefs they form about the type of behaviour that is legitimate, acceptable, and effective.

3.3.1 Indonesia’s National Culture

Indonesia is a country situated in South East Asia between the Indian Ocean and the Pacific Ocean. Indonesia consists of 17,508 islands, 6000 of which are inhabited, and covers an area
as wide as Europe or the United States (Vickers, 2013) which makes Indonesia the world’s largest island nation (CIA, 2014; Runyan, 1998). Indonesia is the fourth most populous country in the world with a population of about 251 million people and comprises over 300 ethnic groups and tribes that include Javanese (40.1%), Sundanese (15.5%), Malay (3.7%), Batak (3.6%), Madurese (3%), Betawi (2.9%), Minangkabau (2.7%), Buginese (2.7%), Bantenese (2%), Banjarese (1.7%), Balinese (1.7%), Acehnese (1.4%), Dayak (1.4%), Sasak (1.3%), Chinese (1.2%), other (15%) (CIA, 2014; Economist, 2007; Warner, 2003; Runyan, 1998). Each ethnic group has its own distinct cultural characteristics and language. It is estimated that around 700 languages are spoken in Indonesia (Warner, 2003). However, Indonesia has only one national and official language, Bahasa Indonesia (Indonesian language).

Indonesia has great diversity not only in terms of ethnicity or language but also in terms of religious pluralism. Nearly ninety percent of the population is Muslim which makes Indonesia the world’s largest Muslim country (Liddle, 1996). Other religions practised in Indonesia include Christianity (9.9%), Hinduism (1.7%), Buddhism and Confucianism (0.9%), and unspecified (0.4%) (CIA, 2014).

Initially, each individual ethnic group in Indonesia had its own distinct culture that has been developed in accordance with its specific local and historical influences (Schefold, 1998). The arrival of Hinduism, Buddhism and Islam, which came from many different sources, greatly impacted on the development of each individual ethnic culture in Indonesia, as Woodward (2011) contends religion and culture seek to influence one another. For instance, Islam has a profound impact on Java. The influences of Hinduism, Buddhism and Islam were different between coastal areas and remote areas where the latter are less influential than the former; thus, the remote areas were affected superficially, with old tribal structures remaining intact (Schefold, 1998). The first kingdom that was influenced by Buddhism is Srivijaya in eastern Sumatra while kingdoms in Java and Bali were influenced by Hinduism. The influences
of Buddhism and Hinduism were almost diminished when Islam came to Indonesia, and most
Indonesians in many parts of the islands converted to Islam from the fifteenth century (Vickers,
2013). External factors again influenced the cultural development in Indonesia with Dutch and
Japanese occupations and, since independence, there have been more modern Westernised
influences (Warner, 2003). During the Dutch occupation, the Dutch introduced some of their
western cultures including a new religion, Christianity. Similarly, the Japanese occupation also
brought some changes to the cultural development in Indonesia. The short period occupation
of Japanese had significant influences on many aspects of Indonesian life which include social,
economic, military and cultural (Sato, 2006, 2010). For example, Sato (2010) argued that one
of the Japanese influences was the practice of some aspects of samurai ethic, known as kessho
or keppanjo or the concept of writing letters in blood. Other Japanese influences, as explained
by Kurawa (1987), were the Indonesian style of the comedy which was much influenced by
manzai or Japanese comic stage dialogue or cross-talk, and some Indonesian songs have also
been influenced by Japanese rhythm and melody. Regarding military, Sato (2010) argued that
the Japanese allowed the Indonesians to establish their own defence force, known as PETA
(Tentara Sukarela Pembela Tanah Air / Volunteer Army of Defenders of the Homeland).
Young Indonesian, including Suharto, who joined PETA were not only taught basic military
but also spiritual strength (seishin). After the Japanese surrendered to the Allies and disbanded
PETA, Indonesia formed its armed forces called BKR in which most of the officers were former
members of the PETA.

Given the diversity of ethnicity, religion and language, the national leaders of Indonesia
attempted to establish one Indonesian national culture (Yampolsky, 1995). This was primarily
based on the fundamental question of what kinds of knowledge and values, and what social,
spiritual, and artistic traditions best describe Indonesians. According to Koentjaraningrat, as
cited in Yampolsky (1995, p. 705), the purpose of a national culture is “to provide a system of
concepts and symbols that give identity to individuals as Indonesian citizens”. This was included in clause 32 of the 1945 constitution: “the government shall advance the national culture of Indonesia”. In order to implement this, the first attempt to establish Indonesian national culture was initiated by the government in the 1950s with the introduction of the Melayu dance *Serampang Duabelas*, followed by the creation of a radio program called *hiburan daerah* (regional entertainment) (Yampolsky, 1995).

Although the government strove to establish a national culture, a few people believe that an Indonesian national culture has yet to be established. Van der Kroef (1952) argued that the difficulty in establishing an Indonesian national culture resided in the fact that Indonesia possessed no uniform basis for national culture. Van Der Kroef (1952) contended that Indonesia is still facing some of the fundamental problems such as *adat* (custom) versus Islam, cultural authority versus individualism, and social revolution versus preservation of tradition. The problems have inhibited Indonesia to have a stable social framework and can lead to the process of disintegration. As long as Indonesians have not solved those problems yet, the establishment of national culture will be retarded.

On the other hand, despite Indonesia consisting of many different cultures, many scholars believe that Indonesian national culture is identical to Javanese culture. Runyan (1998), Koentjaraningrat (1988), Irawanto et al. (2011), and Woodward (2011) claim that the Javanese have been recognised over time to be culturally and politically dominant in Indonesia. Hess (2001) asserted that the attitudes rooted in traditional Javanese practices appear to determine the work attitude in Indonesia, especially in the public sector. Furthermore, Irawanto et al. (2011) argued that Javanese values are the result of mixing the cultural and religious aspects of life. The dominance of Javanese culture is not only because the Javanese is the largest ethnic group in Indonesia, but also derives from the history of Indonesia many centuries ago to which the Javanese culture is closely linked. It began in the pre-colonial era when Java
was a feudalistic kingdom. There were many great Javanese kingdoms such as the *Majapahit* Kingdom, *Mataram* Kingdom, and the *Airlangga* Kingdom. *Majapahit* was one of the largest Javanese kingdoms as its territory encompassed the Indonesian archipelago and included parts of the southern Philippines, southern Thailand, Malay Peninsula, and Sumatra (Gray, 2012; Dove, 1985). The establishment of the Javanese kingdoms in those areas had significant influence in spreading Javanese culture, which incorporated the cultural and religious traditions (Gray, 2012). During this period, Javanese were ruled by aristocrats who acted as the representatives of the kings (Wijayanto, 2011). Wijayanto (2011) argued that the aristocrats enjoyed patrimonial privilege while the king himself enjoyed the privilege of collecting wealth such as money, gold, etc.

According to Crouch (1979), most traditional polities exercised a patrimonial system in which the power of the ruler depended upon the ruler’s capacity to influence and retain the key sections of the political elite. In order to do so, the ruler will exchange his supporter’s tribute and loyalty for material possessions or positions that will satisfy the supporters’ aspirations. Usually, the ruler does not take any interest of the majority of his people into account as he considers that the masses do not play a critical role in his political agenda, unlike the political elites. As a result, political conflicts occur among those elites who attempt to gain and maintain their influences with the ruler who determines the rewards given to each respective elite. Furthermore, the ruler will preserve the balance among the competing political elites in order to conserve his authority. The patrimonial system will last indefinitely as long as the conflicts or rivalries among the political elites are contained and the masses remain politically inactive; thus, the basic unity of interest remains unchanged.

Javanese culture has been given special treatment from the colonial era, when Dutch occupied Indonesia, until the post-colonial era (Irawanto et al., 2011). Irawanto et al. (2011) claim that the appearance of Javanese cultural philosophies in the socio-politico and economic
life of Indonesia became more pronounced during Suharto’s presidency from 1966 until 1998. Suharto gave out positions based on patronage and to protect his political power – to a broad range of people, including for example, Indonesian of Chinese descent in the business sector. Suharto considered Chinese as people who could get the job done while they did not pose any political challenge to his authority (Holmes, 2016). Suharto placed priyayi in many strategic roles in government sectors such as the military, cabinet and business development. The priyayi was intentionally placed in order to, directly and indirectly, encourage the expression of Javanese cultural values which in turn would influence nationwide cultural, economic and political conditions.

Geertz (1960) classifies Javanese into three main social-structural cores that include the village, the market, and the government bureaucracy, and three main cultural types that demonstrate the moral organisation of Javanese culture: abangan, santri, and priyayi. Pepinsky (2011) argued that Geertz’s typology based on “stream” (aliran) of Islam whereas other scholars have examined Javanese religious life from different academic approaches (Salim, 2013). Salim (2013) argued that Geertz is one of the scholars who views that many Muslims in Java practice their Islam that has been mixed with local beliefs that have existed before Islam. Geertz (1960) defines abangan as those Javanese who practise Islam that has animistic and Hinduistic influences, or in other words, they emphasise the animistic aspects; on the other hand, the santri are those Javanese who practise purer Islam. Most of the abangan come from the villages while most of the santri are from the markets or are traders. The abangan are broadly related to the peasant element of the Javanese, and santri generally represent the trading element with some certain elements of the peasant as there are small numbers of abangan in the traditional market. The last social-structural group is priyayi. Geertz (1960) defines priyayi as Javanese white-collar elite who have their roots in the Hindu-Javanese courts of pre-colonial times and embrace Hinduism.
In order to maintain his presidency, Suharto implemented many programs that included the restriction of actions that were considered to endanger the government. For example, women were constrained to wear a veil or hijab. Smith-Hefner (2007) argues that the restriction was put in place because the Suharto regime was widely regarded as more supportive of Javanist and secular-nationalist values than Islam. Many people considered Suharto as an abangan and essentially hostile to Islam (Hefner, 1993). Suharto was raised by his family in a Hindu javanised milieu that made him more a nominal abangan than a practising Muslim. Suharto and his close generals tried not only to exclude Muslims from political power, but also to restrict their influence in Indonesian civil life and culture.

Besides those restrictions, the Suharto regime also implemented several programs to introduce and promote Indonesian national culture, that is, Javanese culture. Wilson (2011) claimed that Suharto’s regime ideology was firmly anchored in the concept of Javanese culture. Some of the programs intended to promote Indonesian culture or Javanese culture included the expansion of tourism which promoted Yogyakarta (one of the cities that is identical with Javanese culture) as the second main tourist destination after Bali (Dahles, 2002), the promotion of Pencak Silat as the Indonesian martial art (Wilson, 2011), and the introduction of Indonesian community radio that broadcast in the Javanese language (Sujoko, 2011). These programs were intended not only to enhance people’s appreciation of deep cultural behaviours and values but also to be used as a “nation and character building tool” (Sujoko, 2011; Wilson, 2011).

In the mid-1980s, Suharto’s regime also implemented what was known as the transmigration program in order to unite Indonesians. Runyan (1998) argued that the purpose of the transmigration program, initially, was to alleviate population pressure. During that period, the government successfully moved more than 3.6 million people from their Java homelands to the outer islands. However, as the transmigration program progressed, the aim
of the program shifted, and it became a means of separating the indigenous cultures from their lands and resources, and bringing together the country’s disparate native cultures into a “developed” society (Runyan, 1998). Moreover, the New Order government of Suharto used the transmigration program to assimilate and unify the various cultures of Indonesia into a single way of life that is Javanese culture. Suharto was able to manipulate Javanese cultural values as the source of legitimacy for his decisions and policies (Sarsito, 2006). Furthermore, Suharto was able to convince Indonesians that Javanese culture offered many benefits if properly practised. Nowadays, the influence of Javanese culture has deeply influenced the life of organisations in Indonesia, and the leadership style that seems most acceptable to Indonesians is one that reflects traditional Javanese cultural values (Irawanto et al., 2011).

According to Irawanto et al. (2011, p. 126), Javanese culture is “the complex mixture of ideas, norms, regulations, and values that most Javanese people adopt and use to support their life”. The present Javanese culture in Indonesia is a mixture of the indigenous, the Hindu and Buddhist civilisations, the influence of Islam that came to Indonesia in the fifteenth century, and Christianity (Irawanto et al., 2011; Woodward, 2011). Furthermore, Irawanto et al. (2011) believe that Javanese culture is a unique culture with many facets that include the Javanese stratification of social classes and distinctive cultural values. Respect for social hierarchy is among the most basic aspects of Javanese culture (Woodward, 2011). The relationship among abangan, santri, and priyayi is unique and bounded by tacit rules and regulations, even in the way they communicate and interact in the social context.

Woodward (2011) divides the complex system of Javanese speech register into three categories. First, ngoko is spoken by a person to communicate with children, social inferiors, and peers in some contexts. Second, kromo is spoken by a person to demonstrate his/her respect and politeness to superiors. Third, kromo ingil is spoken by a person to superiors where status differences are extreme. Moreover, the selection of the speech level appropriate for both self
and others is influenced by differences in age, gender, social status, educational attainment, and the social context where communication is conducted.

Although the Javanese way of life is governed by hierarchy, there are also some cultural values that bind the community. Javanese culture is characterised by valuing communal harmony and holding it in higher esteem than individual rights (Runyan, 1998). According to Rajiani and Jumbri (2011), there are two cultural aspects of Javanese collectivism that a community must possess, gotong-royong and musyawarah. Gotong royong is a philosophy that requires people to help each other, whereas; musyawarah refers to the fact that all decisions should be made only after a consensus or compromise has been reached. Furthermore, the collectivist ethos is characterised by the concept of rukun, which guides people regarding their social interactions. Rukun is the resolution of differences by cooperation, mutual acceptance, a quietness of heart, and harmonious existence. To achieve rukun, individuals cannot express their opinions individually; rather, they should be expressed through and become part of the group. Hence, all overt expressions that could create conflict and disharmony should be avoided.

Harmony in life is a Javanese value derived from the ideology of a peaceful life (Irawanto et al., 2011). Irawanto et al. (2011) contended that the key components of a peaceful life are alus-kasar and lair-batin. Alus means polite, calm and soft while the term kasar represents impoliteness, coarseness and cruelty. The term lair refers to the realm of appropriate human behaviour, and the term batin represents the way Javanese interact with each other and show polite and correct behaviour. In order to be respected, Javanese have to show their lair-batin and alus while avoiding kasar.

Geertz (1960) stated that Javanese people are expected to andap asor when interacting with others. This means that people have to be humble and polite while demonstrating the correct behaviour. Javanese are also expected to be nrimo or accepting; hence, it is important
to always accept and respect somebody’s argument. In regard to relationships, Javanese are expected to embody the values of *hormat* which is the recognition of the rank of elders or superiors by demonstrating the appropriate forms of etiquette. It is inappropriate and impolite to refuse or confront elders or superiors directly. Sutarto (2007) argued that Javanese people believe that being Javanese means that they will have a correct (*bener*), appropriate (*pener*), and safe (*slamet*) life.

Based on the discussion above, Indonesian culture is greatly influenced by Javanese culture since, as Woodward (2011) claimed, the Indonesian national culture is mostly derived from Javanese culture. The influence of the Javanese culture is deeply rooted and manifested in many forms the Indonesian way of life. Even though Indonesia is becoming a more modern society under the influences of globalisation, the Javanese cultural values are still considered as the most acceptable to most Indonesians. This can be seen in the way that Indonesian public institutions are managed; these are often highly centralised, control-oriented public sectors that are accountable to superiors (Rajiani and Jumbri, 2011).

### 3.4 Organizational Culture

Since there is no agreement regarding the concept and definition of culture, it is not uncommon that numerous applications of the term ‘culture’ can be found in organisation studies (Smircich, 1983; Ogbonna, 1992). Fisher and Alford (2000) contended that there has been long-standing disagreement over the definitions, approaches, and origins of organisational culture. Moreover, they found that 164 definitions of organisational culture emerged in literature reviews. Despite the wide diversity of definitions, organisational culture has attracted significant attention from many scholars as the findings of numerous studies have clearly demonstrated that culture influences organisational performance (Edward et al., 2013; Fisher and Alford, 2000).
The idea of organisational culture was first introduced to the field of organisational studies and management in the late 1970s (Glynn et al., 2016). It has become one of the central concepts of organisational theory in the last three decades (Dupuis, 2008). The concept of organisational culture is derived from anthropology and organisational psychology, and it attempts to describe common characteristics of an organisation – a set of shared beliefs, values, and norms –, in addition to other formal organisational aspects such as rules, work organisation, and structures (Dupuis, 2008; Glynn et al., 2016). Advocates of the notion claim that organisational culture drives the members of an organisation to engage in particular behaviour and form attitudes which in turn affect the organisation’s performance (Glynn et al., 2016). Nonetheless, the contemporary study of an influence of culture on an organisation cannot be disconnected from earlier work (Smith & Riley, 2011; Wren & Bedeian, 2009). The core concepts and tools developed by earlier scholars are still applicable even if they originated over one hundred years ago (Smith & Riley, 2011). The concept of organisational culture, to some extent, has also been influenced by some earlier organisational studies. Organisational studies has its origin in the works of early 20th century reflections on how to manage large organisations most effectively and its pioneer thinkers include Frederick Taylor, Henri Fayol and Max Weber. Among these, Max Weber’s notion of bureaucracy has proved particularly important in understanding of organisational culture.

Max Weber (1978) postulated an ‘ideal type’ of organisation which he called ‘bureaucracy’ or ‘rule by the office’. He believed that the purely bureaucratic type of administrative organisation was able to achieve the highest degree of efficiency. Moreover, Weber argued that the ideal bureaucracy has some essential characteristics and offers several advantages as shown in table 3 below.
Table 3. Weber’s Bureaucracy Characteristics and Advantages.

<table>
<thead>
<tr>
<th>CHARACTERISTICS</th>
<th>ADVANTAGES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Division of Labour. Labour is separated, and sectors have their own clearly defined authority and responsibility.</td>
<td>Specialization will increase efficiency.</td>
</tr>
<tr>
<td>Managerial Hierarchy. A hierarchy of authority is used to organise offices or positions.</td>
<td>A clear chain of command will develop from the top to the lowest level of an organisation; each level has its defined authority hence better communication can be achieved.</td>
</tr>
<tr>
<td>Formal Selection. All employees are required to show their formal education, examination, or training as it is used to demonstrate their technical qualifications.</td>
<td>Merit and expertise are used as a means of hiring and promoting employees. This system provides benefits for both employer and employee.</td>
</tr>
<tr>
<td>Career Orientation. Employees are career professionals and work for fixed salaries and pursue careers within their respective fields.</td>
<td>Professional employees will ensure not only that the assigned duties can be accomplished but also that there be a continuity of operations across election cycles.</td>
</tr>
<tr>
<td>Formal Rules and other controls. In performing their duties, all employees are to comply with formal rules and other controls.</td>
<td>Enforcing formal rules and other controls will increase efficiency.</td>
</tr>
<tr>
<td>Impersonality. Rules and other controls are objective and consistently applied in all cases.</td>
<td>Rules and other controls will protect subordinates from the subjective actions of their superiors.</td>
</tr>
</tbody>
</table>

Sources: Weber (1978) and Wren & Bedeian (2009)

On the other hand, Wren & Bedeian (2009) argue that based on research and experience, bureaucracy has several shortcomings. First, in a bureaucracy, employees tend to comply with rules and regulations rather than focus on achieving the organisation’s primary objectives. Second, bureaucracy compels employees to rigidly follow rules and regulations without considering any changes in the situation. Moreover, bureaucracy results in employees becoming passive as they do what their supervisors ask them to do. Third, conflict between sub-units can arise as the delegation of authority places more emphasis on a certain unit completing an assigned job rather than focusing on accomplishing an overall goal. Fourth, rules and other controls can create employees who “work to the rules”, which inhibits innovation and creativity. Employees may worry that they will make a mistake and therefore choose to remain secure or safe by only following pre-set habits or rules.
As the shortcomings of a bureaucratic structure became more apparent, scholars in the 1950s and 1960s such as Douglas McGregor and Rensis Likert attempted to address the depersonalising nature of bureaucratic organisations. McGregor proposed Theory X and Theory Y while Likert developed his ‘systems 4’ profile of organisational characteristics to help overcome some of the worst aspects of bureaucratic organisations (see Figure 4 below).

McGregor in his 1960 article, ‘The Human Side of Enterprise’, explained that a manager’s style of operating was determined by his/her managerial assumptions about human behaviour and human nature (Wren & Bedeian, 2009). McGregor (1960) argued that most managers’ styles of operating were based on two assumptions: ‘the conventional conception of management’ or Theory X and Theory Y. In Theory X, it is assumed that management has a responsibility to organise its resources (people, materials, money, and equipment) for the economic benefits of an organisation’s owners; management is required to motivate staff, direct their efforts, modify their behaviour, and control their actions in order to meet the organisation’s needs; management needs to actively intervene in the organisational process by persuading, controlling, rewarding, and punishing employees; by nature, the average person lacks motivation, does not like to work hard, likes to be led, avoids accepting responsibility, and is resistant to any change.

On the other hand, McGregor (1960) postulated that Theory Y was based on the following assumptions: management has a responsibility to organise resources (people, materials, money, and equipment); by nature, people are not resistant to any change or reluctant to fit the needs of an organisation, but it is because the organisation’s circumstances that makes them to become so; in meeting organisational objectives, the threat of punishment and external control are not the only means to use, but people are committed to exercising their self-control and self-direction; and when given the opportunity, people not only accept but also look for
responsibility. Refusing to accept responsibility and lack of motivation result from experience and are not innate human characteristics.

According to Wren and Bedeian (2009), many people have misinterpreted McGregor’s Theory X and Y as opposing beliefs. Conversely, McGregor argued that Theory X and Y are not managerial strategies but assumptions about the nature of man. This belief significantly influences managers’ style of operating in organising and managing their respective organisations.

According to Likert (1969), firms should strive to have what he called ‘system 4’ for their system of management. Findings of studies Likert undertook revealed that:

“firms (plants, department, etc) whose management systems are toward the system 4 end of the continuum, in comparison with firms whose management systems are more toward the system 1 end, achieve higher productivity and earnings, lower costs and less waste, less absence, better labour relations and employee satisfaction, and better physical and mental health among their employees” (Likert, 1969, p. 137).

On the one hand, firms that move toward system 4 in their management strategy will have favourable results in the long term. On the other hand, firms whose management systems tend to be in line with system 1 will have an unfavourable result in the long term although they may show favourable results in the short term. Likert (1969) claimed that his system 4 could be applied to every country regardless of its cultural characteristics.

Nevertheless, by the early 1980s, cultural factors were increasingly being argued to have significant influence on organisational performance. As mentioned above, in the last three decades a new approach has emerged, that of considering organisational culture. This new approach tries to resolve the issues faced by managers of large organisations by defining the role of leaders in establishing organisational culture.
<table>
<thead>
<tr>
<th>Leadership</th>
<th>1) How much confidence is shown in subordinates?</th>
<th>2) How free do they feel to talk to superiors about job?</th>
<th>3) Are subordinates' ideas sought and used, if worthy?</th>
<th>4) Is predominant use made of 1) fear, 2) threats, 3) punishment, 4) rewards, 5) involvement?</th>
<th>5) Where is responsibility felt for achieving org. goals?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>None</td>
<td>Condescending</td>
<td>Substantial</td>
<td>Complete</td>
<td>Mostly at top</td>
</tr>
<tr>
<td>Motivation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Downward</td>
<td>With suspicion</td>
<td>Often wrong</td>
<td>Know little</td>
<td>Little, always with fear and distrust</td>
</tr>
<tr>
<td></td>
<td>Mostly downward</td>
<td>Poss. with suspicion</td>
<td>Censored for boss</td>
<td>Some knowledge</td>
<td>Little, usually with some condescension</td>
</tr>
<tr>
<td></td>
<td>Down and up</td>
<td>With caution</td>
<td>Limited accuracy</td>
<td>Quite well</td>
<td>Mod., often fair amt. confidence and trust</td>
</tr>
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<td></td>
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</table>

Figure 4. Profile of Organisational Characteristics, Source (Likert, 1969)
The culture of a group or an organisation is created when certain conditions are met. Schein (2004) contends that a group of people can create a group’s culture when: they have been together long enough to have shared significant problems; they have had opportunities to solve those problems and test the effects of their solutions; and, they have taken other people into the group. In other words, a group’s culture is generated when members of the group collectively have experienced a unique and shared history (Trice and Beyer, 1993; Schein, 2004; Smircich, 1983; Wiegmann et al., 2004). Organisational culture is greatly influenced by the founders and the early leaders of an organisation as they attempt to solve problems and avoid anxiety positively. When the proposed solutions work, members of the organisation will adopt them until they face new problems that cannot be resolved. As organisational culture is collectively held and deeply rooted in history, it is difficult to change and manipulate (Mearns & Flin, 1999). Taking into account all aspects discussed above, the definition of organisational culture in this study is in line with Schein’s (2004, p. 17) definition:

A pattern of shared basic assumptions that was learned by a group as it solved its problems of external adaptation and internal integration that was worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think, and feel in relation to those problems.

According to Wallace et al. (1999), organisational cultures consist of cognitive systems explaining how people think, reason and make decisions. Culture influences an organisation’s goals, and can be used to measure the organisation’s effectiveness (meeting those goals) (Turnipseed, 1988). At the deepest level, culture consists of a complex set of values, assumptions, and beliefs that define the ways in which a firm conducts its business. Organisational culture is determined by a broad range of internal and external influences some of which are beyond managerial control (Wallace et al., 1999). In dealing with those influences,
every organisation has its own perspective and solutions which make each organisational culture unique although the underlying issues may be common (Schein, 2004).

Trice and Beyer (1984), as cited in Turnipseed (1988), pointed out that organisational culture consists of two basic components. First, its substance, which consists of beliefs, norms, ideologies, and values that serve as the networks of meaning, which hold people together and elucidate and interpret their world to them. Second, its forms or the practices that are the manifestations of the substance which is expressed, communicated, and affirmed to members through symbols, rituals and myths. Culture is a highly enduring characteristic of an organisation which evolves slowly.

An organisation’s ideologies are the substance of an organisation’s culture that is imported from various levels of its environments such as transnational cultures, national cultures, regional and community cultures, industry culture, occupational culture, and other organisations’ cultures (Trice and Beyer, 1993), as shown in Figure 5.

Based on the figure above, Trice and Beyer (1993) elucidated that transnational cultures refer to a set of basic underlying assumptions that exceed national boundaries. For example, religion, capitalism, and science are some of the transnational cultures. National cultures
represent a set of beliefs, values and norms of an ethnic group or a nation (Hofstede, 2001; Trice and Beyer, 1993). Regional culture is based on cultural values that exist within a specific geographical area or territory (Trice and Beyer, 1993). In regard to industry culture, Gordon (1991) believes there are three variables that drive industry culture: competitive environment, customer requirements, and societal expectations. Organisations within an industry share certain cultural characteristics as these organisations most likely share the same goal of survival (Gordon, 1991). Much of the occupational culture is derived from training through which recruits indoctrinate new members with beliefs, values and norms that specifically apply to a certain occupation (Trice and Beyer, 1993). Trice and Beyer (1993) argued that the inherent ideas of each ideology sometimes contradict and sometimes complement one another. For example, as stated earlier, Indonesia is still facing some cultural issues such as adat (custom) versus Islam, cultural authority versus individualism, and social revolution versus preservation of tradition.

Organizational culture consists of many critical elements. Schein (2004) and Guldenmund (2000) identified some characteristics of organisational culture:

1. Structural stability (Culture is stable over time, and it defines the group. It survives even when some members of the organisation depart and is hard to change.);
2. Depth (Culture is the deepest, often unconscious part of a group and is, therefore, less tangible and less visible than other parts. It is multi-dimensional);
3. Breadth (Once the culture has developed, it covers all of the group’s functioning. Culture is pervasive; it influences all aspects of how an organisation deals with its primary task, its various environments, and its internal operations);
4. Patterning or integration (Culture somehow implies that rituals, climate, values, and behaviours tie together into a coherent whole; this patterning or integration is the essence of what we mean by “culture”).
5. It leads to observed practices.

The culture of an organisation can be analysed at several different levels. Schein (2004) argued that organisational culture can be analysed at three different levels of cultural phenomena. The first level of organisational culture can be analysed from the visible artefacts that include technology, architecture, dress code, office layout, public documents, and visible or audible behaviour patterns. The data from the visible artefacts are easy to obtain but difficult to analyse. The second level comprises the values that govern people’s behaviour within an organisation. Discovering the values of an organisation is not an easy task, but it can be conducted by interviewing important members of the organisation and analysing documents. The values of the organisation can explain why people behave in such ways. The third level of the analysis of an organisational culture is the investigation of underlying assumptions. The underlying assumptions are the essence of the culture of the organisation that determines how group members perceive, think and feel. Moreover, members of the organisation are not aware of the underlying assumptions.

Some observers claim that organisational culture and organisational climate are synonymous. However, they are two different constructs. According to Turnipseed (1988), Schein (2004), Schneider et al. (2013), and Moran & Volkwein (1992), there are several features that distinguish culture from climate, which include:

- Culture consists of shared assumptions, beliefs, and values that prevail in an organisation, whereas climate comprises those characteristics of an organisation which derive from the manner in which the organisation deals with its environment and members;

- While culture forms over time, is stable, and difficult to change, climate is dynamic and volatile as it can easily be influenced and affected by various factors such as:
interactions between organisation’s members with environments, events, structure, the prevailing business and economic environment, physical conditions, management policies, atmosphere, behavioural norms, managerial convergence;

- Culture shapes and influences climate while climate is part of culture and is a manifestation of culture;

- Climate can be used as a basis for understanding situations and reflects the prevailing values, norms and attitudes of the organisation’s culture, whereas culture is an abstraction that is hard to define and operationalise;

- Referring to Schein’s level of culture in the paragraph above, climate operates at the first and second levels (the attitudes and values levels) while culture operates from the first level to the third level (the attitudes, values, and basic assumptions levels).

3.5 Military Culture

Like many other organisations, any military organisation has its own culture. Military organisations have a distinct view in regard to their world and consider the proper conduct of their missions or tasks as the primary factor that determines their culture (Kier, 1996; Hillen, 1999; Wilson, 2008). Wilson (2008) believes that a mission provides a common purpose for an organisation to justify its existence and claim on resources, the self-worth, rewards, and privileges of its personnel. Military culture is shaped by a set of values and traditional ethics, the preservation of which is a precondition of fighting power (Bacevich, 1993). Historically, the values that underpin military culture have evolved in response to the need for men to win the battle (Hillen, 1999).

Since military culture is the collection of ideas and beliefs about an armed force, the military’s organisational culture is different from the national character and may reflect some
aspects of the civilian society’s culture (Kier, 1996). Wilson (2008) asserted that the institutional character of military culture, the strength and cohesiveness, lead military personnel to think and act in ways different from other members of their society. Kier (1996) believes that the military’s powerful assimilation processes are barely influenced by the civilian society.

Snider (1999) argued that military culture can be viewed from two different perspectives. First, military culture can be defined from the perspective of academic disciplines. In this view, military culture refers to “the deep structure of organisations, rooted in the prevailing assumptions, norms, values, customs, and traditions which collectively, overtime, have created shared individual expectations among the members” (Snider, 1999, p. 14). Capstick (2003) asserted that military culture provides a common framework and common expectations for the military personnel regarding standards of behaviour, discipline, teamwork, loyalty, selfless duty, and the customs that support those elements. Second, military culture can be viewed from the perspective of its functional approach. The central beliefs, values and complex symbolic formations of the military culture are determined by warfare. In this view, military culture is defined as “an elaborate social construction, an exercise of creative intelligence, through which we come to imagine a war in a particular way and to embrace certain rationalisations about how war should be conducted and for what purposes” (Snider, 1999, p. 15).

Military culture is influenced by several factors. Hillen (1999) contended that three prominent factors significantly influence military culture. First, the unique requirement of its workplace has shaped the values of the military. Second, the resources devoted to the national defence have determined the way the military manages its business. Third, is the way that a military organisation is structured and conducts its missions. Murray (1999) adds several other factors that greatly affect the culture of military organisations; these include history,
geography, the professional ethos, recent military experience, and the environment within which the organisation operates.

According to Dunivin (1994), military culture is a unique way of life, learned, broadly shared by its members, adaptive to changing conditions, and symbolic in nature. Military forces and structures are built around combat activities which define the essence of military culture: the combat-ready, masculine-warrior (Dunivin, 1994). Force structure is formed to deal with threats (Williams, 2008). The force structure has evolved from a mass military force that deals with a threat such as enemy invasion to nuclear war to a smaller professional military force that deals with a threat such as ethnic violence and terrorism (Williams, 2008).

The emergence of a new threat is one of the external factors that influence military culture. Similar to other organisational cultures, military culture must be able to deal with external and internal factors in order to survive. Farrel (2008) argued that like a natural system, the organisation is driven by the need to survive; thus, it is imperative that the organisation respond or adapt to a range of hostile pressures. Other than threat, other external factors which influence military culture include technology, civil-military relations, women’s role in combat, and the inclusion of gay personnel (Huntington, 1995; Farrel, 2008; Nielsen, 2012). On the other hand, some internal factors include organisation innovation and transparency (Farrel, 2008). The military is expected to respond and adapt to those pressures appropriately; otherwise, it will compromise its military effectiveness (Mileham, 2007).

According to Burk (1999), military culture comprises four elements: discipline, professional ethos, ceremonial displays and etiquette, and cohesion and esprit de corps. Burk (1999, p. 448) defines discipline as “the orderly conduct of military personnel, whether individually or in formation, in battle or garrison, most often prescribed by their officers in command”. The purposes of discipline are to minimise the confusion and disintegrative
consequences of battle by imposing order on it and ritualising the violence of war and setting it apart from ordinary life.

With respect to professional ethos, Burk (1999, p. 450) sees it as a “set of normative self-understandings which for the members define the profession’s corporate identity, its code of conduct and for officers, in particular, its social worth”. The military ethos is determined by its professional function - the management of violence on behalf of society. The ethos is shaped by its professional function, the society where the armed forces serve, and international laws.

The next element is the ceremonial displays and etiquette. The ceremonies and etiquette form an elaborate ritual which has several functions: to affirm mutual solidarity, to control society’s anxieties and ignorance, and to celebrate the existence of the military as a part of society (Burk, 1999).

Finally, the fourth element is cohesion and esprit de corps. Cohesion and esprit de corps are the measure of willingness to perform a mission and to fight, or a unit’s morale. Harrison (2006, p. 562) defines unit cohesion as “a special form of primary group bonding which militaries foster within their small units to facilitate the fierce personal loyalties that are considered essential to surviving in combat”.

In addition to these four elements, Hall (2011) added several other characteristics of military culture that include:

- Authoritarian structure.
- Class system. The world of the officer and the enlisted man make up two distinct subcultures in the military, each having a different culture.
- Importance of mission. A total commitment to the military means a commitment to one’s unit, the unit’s mission and its members. Total commitment is the very essence of military unit cohesion, which is one of the essential factors in order to survive in combat.
- Preparation for disaster. The military world is distinct from the civilian world since the military is constantly prepared for disaster and always maintains its readiness.

Although, in general, the military share the same culture, there are separate and distinct subcultures within a military organisation. The existence of subcultures is heavily influenced by traditions and the missions they perform (Murray, 1999; Snider, 1999). The army, navy, air force, and marines have their own distinctive cultures. Each individual service has its own view of war. Moreover, each individual service has developed its own ideas and concepts which in turn will influence the institutional culture and behaviour of each (Snider, 1999).

Military culture is one of the essential factors of the organisations. It not only influences the military effectiveness but also impacts on the processes of military innovations and transformation for the next war (Murray, 1999). Moreover, military culture provides a foundation for the military organisation to develop doctrine (Siegl, 2008). The ability to appropriately develop doctrine will determine the success of the military in carrying out its missions or tasks. Siegl (2008) argued that the French military culture after World War I discouraged open discussion and examination that led to the leadership’s design that incapable of dealing with important issues. As a result, the French chose and developed inappropriate policies which made them incapable of defending themselves against Germany during World War II. On the other hand, the German culture after World War I encouraged lower-ranking officers to speak to their leaders. This culture assisted German officers to develop appropriate policies and adopt innovative technology.

3.6 Safety Culture

3.6.1 Reason’s Defence-in-depth / Accident Causation

Reason (1997) divided accidents into two categories, individual accidents and organisational accidents. Reason (1997, p.1) believed that “organisational accidents have multiple causes
involving many people operating at different level of their respective companies while, individual accidents, by contrast, are ones in which a specific person or group is often the agent and the victim of the accident”. Moreover, Reason (1998) explained that individual accidents are by far the larger in number although the consequences are not far-reaching, whereas, the organisational accidents occur very rarely but can have a devastating effect on uninvolved populations, assets, and the environment.

In order to understand the factors leading to organisational accidents, Reason (1997) created the defence-in-depth model, otherwise known as the “Swiss Cheese Model”.

![Figure 6. Swiss Cheese Model](image)

Source: Reason (1997)

According to Reason’s Model, an accident occurs when a number of contributing factors come together; or, in other words, a combination of unsafe acts (actives failures) and unsafe conditions (latent conditions) is mostly the main cause of an accident. One single factor that breaches the safety system defences is rarely the sole cause of an accident. The safety system defences consist of barriers and safeguards that are categorised according to: their functions (awareness, understanding, warning, guidance, restoration, interposition, containment, escape, and rescue) and their modes of application (“hard” and “soft” defences). Each slice of Swiss cheese in a stack of slices represents the defensive layers in the process.
These systems’ protections are largely resilient against human or technical failures since they have many layers of defence.

However, each of the defensive layers has gaps and holes created by the combination of active failures (violations and errors committed by front-line personnel) and latent conditions (the failure of designers, builders, managers, and maintainers to anticipate all possible scenarios). When the holes in each step of the process are aligned, the safety defence mechanism has been defeated, leading to a situation where a catastrophic error can occur. Violations and errors committed by front-line personnel such as pilots, air traffic controllers, engineers, technicians, maintenance personnel and the like do not occur instantly; rather, they occur because of the existence of the latent conditions. Strategic and other top-level decision-makers can have a significant influence on the establishment of latent conditions. Moreover, these decisions will also have a great impact on the organisation as it will shape organisational culture and may lead to error-producing factors. Subsequently, the weak organisational safety culture that arises may influence the barriers and safeguards of the whole organisation, thereby undermining the organisation’s system of protection. It can be concluded that defence-in-depth is vulnerable to the safety culture, which can adversely undermine a system’s protection, as the safety culture can influence the system’s protection at every level of barriers and safeguards.

Aviation accidents, one of the organisational accidents, are rare events and are typically caused by the culmination of several concurrent failures in mechanical, human, or technological components in the air transportation system (Wells, 1997). Like many other organisational accidents, aviation accidents have multiple causes involving many people operating at different levels, making it difficult to determine precisely the kinds of errors and the level at which they occurred. Reason (1997) believes that an accident or incident can occur if minor errors or hazards in one area are combined with others. Nevertheless, accidents are the
result of significant system failures that might not be detected in the early stages, and therefore might not provide early warning of a deterioration that resulted in failure (Wells, 1997).

3.6.2 Safety Management System (SMS)

According to the FAA Advisory Circular (2006), an SMS concept can be explored by examining three words: safety, management, system. In addition to those words, safety culture is another factor that is important for an SMS. ICAO (2013) defined four aspects of an SMS as follows:

1. Safety can be defined as a condition in which risk to human injury or property damage can be maintained or reduced to acceptable level and conducted through a continuous process of hazards identifications and risk management.

2. Management. Safety is a managerial process that is conducted jointly by operators and regulators as well as other supporting organisations. The process of safety management begins when an organisation embarks on the process of designing and implementing procedures to control risk in flying operations. Safety management is the quality management of safety of flight operations and other supporting factors to achieve the desired safety outcomes.

3. System. The system in an SMS can be defined as an integration of human and other resources to achieve goals in a particular environment. In this system, management’s role is to plan, organise, direct and control all the available resources to achieve the organisation’s objectives.

4. Safety Culture. The three aspects mentioned above cannot be implemented if the people in the organisation do not possess a safety culture. Safety culture comprises of three elements, namely psychological (how people think), behavioural (how people behave) and organisational elements (control of management). Control of management
consists of providing transparent and effective safety reporting systems and communication systems in regard to safety and disseminating these to subordinates and superiors.

Based on many research findings, the success of SMS implementation depends upon two factors: management commitment and supervisory support, both of which can create a safety culture within an organisation (Blair, 2013). Nevertheless, Hale et al. (2010) argued that the implementation of an SMS, if not carefully controlled, will satisfy only the safety professionals and managers, and it becomes a matter of complying with a regulatory prerequisite rather than a means that can be utilised as best practice to enhance safety (Roelen and Klompstra, 2012). Moreover, an SMS must be treated vigilantly as it can create a false perception among managers and workforces in an organization as an SMS provides safety policies, procedures, plans and monitoring arrangements on paper and, thus, all personnel may believe that their company has a good safety level (Booth and Lee, 1995). In order to effectively and efficiently implement an SMS, organisations require a good safety culture, as this dictates and offers a key predictor of the safety performance of an organisation (Blair, 2013; Booth and Lee, 1995). Furthermore, a weak safety culture can possibly break the procedural safety defences of an organisation, which in turn, may lead to an accident if the organisation does not understand and manage safety culture properly (Taylor, 2010).

### 3.6.3 Safety Culture

The term ‘safety culture’ first officially emerged after the nuclear accident at Chernobyl in 1986 (Cox and Flin, 1998; Mearns and Flin, 1999; Glendon et al., 2006; Braithwaite, 2011; Antonsen, 2009; Edward et al., 2013). Even though there has been much research on safety culture, there is no universally accepted definition of this concept (Reason, 1998; Antonsen,
The definition and the concept of safety culture have been discussed by some scholars: Hale (2000), Zhang et al. (2002), Wiegmann et al. (2002, 2004), Guldenmund (2000, 2010), Antonsen (2009), and Glendon et al. (2006). This unfinished discussion on the definition and the concept of safety culture has led to Hale (2000), Hopkins (2006) and Antonsen (2009) contending that there is no such thing as safety culture, although there is definitely a cultural impact on organisational safety. Nonetheless, for the purpose of this research, the term ‘safety culture’ will be used. In this context, the meaning of safety culture corresponds to the concept that advocated by Hale (2000), Hopkins (2006), and Antonsen (2009) in which it means the influences of cultural factors on safety. Quinlan (2014) in his book, *Ten Pathways to Death and Disaster*, discusses and demonstrates that a number of fatal incidents occurred mostly due to structural problems with safety systems that include failure to consider all aspects relevant to a particular hazard, the hierarchical nature of the system, the failure to heed concerns expressed by supervisors, consultants and workers, and inadequate regulatory oversight. It is argued here that cultural factors, to some extent, have contributed to the poor safety practice of the affected organisations.

As mentioned above, some scholars and safety professionals have proposed their own respective definition and concept of safety culture. However, considerable disagreement regarding safety culture still exists. First, some scholars consider safety culture as a separate entity while others consider safety culture as a part of the organisational culture (Hale, 2000; Guldenmund; 2000; Antonsen, 2009). Hale (2000) explained that according to the definition of safety culture derived from the International Atomic Energy Authority (1991) or ACNI (1993) and a number of academic papers, have since developed the notion of safety culture further. Antonsen (2009) added that the underlying assumptions of this perspective are that safety culture is an analytical concept and regarded as a conceptual label that symbolises the relationship between safety and culture. It is assumed that safety culture is one of the
components of an organisational culture that is not instilled but can be improved (Wiegmann et al., 2004). Moreover, Antonsen (2009) stated that this perspective has two benefits: it provides the clearer concept of safety culture, and a researcher can apply theoretical perspective from anthropology and sociology into the safety culture study. On the other hand, Wiegmann et al. (2004), Guldenmund (2000) and some other scholars believed that safety culture is part of organisational culture. From this perspective, the definition and concept of safety culture were mainly derived from the concept of organisational culture (Wiegmann et al., 2004). For the purpose of this study, safety culture means “those aspects of the organizational culture which will impact on attitudes and behaviour related to increasing or decreasing risk” (Guldenmund, 2000, p. 251).

Second, there is little consensus regarding the relationship between safety culture and safety climate. Some scholars believe that safety culture is synonymous with safety climate. On the other hand, some argue that safety culture is a different entity from safety climate. A safety culture is different from a safety climate, and is defined by Zhang et al. (2002, p. 3) as:

“The enduring value and priority placed on worker and public safety by everyone in every group at every level of an organization. It refers to the extent to which individuals and groups will commit to personal responsibility for safety; act to preserve, enhance and communicate safety concerns; strive to actively learn, adapt and modify (both individual and organizational) behaviour based on lessons learned from mistake; and be rewarded in a manner consistent with these values.”

They define safety climate as:

“The temporal state measure of safety culture, subject to commonalities among individual perceptions of the organisation. It is therefore situationally based, refers to the perceived state of safety at a particular place at a particular time, is relatively
unstable, and subject to change depending on the features of the current environment or prevailing conditions.”

Third, another disagreement regarding safety culture is its key organisational indicators. Wiegmann et al. (2004) claimed that it is not surprising since there are various definitions of safety culture. Numerous components or indicators that contribute to safety culture have been proposed by many scholars and safety professionals. For example, Wiegmann et al. (2004) proposed five components of safety culture indicators: employee empowerment, reward systems, organizational commitment, reporting systems, and management involvement. However, the components of safety culture in this study are in line with Reason’s description of safety culture. Reason (1997) argued that, in order to have a good safety culture, organisations need to engineer a safety culture within their respective organisations and promote several sub-components of safety culture. Reason (1997) identifies these five important sub-components as:

- Reporting culture: people voluntarily report any safety-related concern.
- Just Culture: essential safety-related information is equally distributed within the organisation.
- Flexible culture: people can flexibly alter the working condition from the conventional hierarchical mode to a flatter mode with respect to safety.
- Learning culture: any safety-related information is thoroughly examined, and if required, people make changes accordingly.
- When all four subcomponents of a safety culture interact, they will generate an informed culture (Reason, 1997). Informed culture means that people possess safety knowledge, so they are aware that the environmental, organisational, technical and human factors are closely linked to creating a good safety system.
Fourth, there are various methods and instruments to assess safety culture. As in organisational culture studies, ideas concerning safety culture research depend on which academic discipline it is approached from (Wiegmann et al., 2004; Helmreich & Merritt, 1998). Wiegmann et al. (2002 & 2004) classified the study of safety culture approach into two broad categories: the socio-anthropological and the organisational psychology perspectives while, Guldenmund (2010) grouped safety culture study into three main approaches: academic, analytical, and pragmatic. Quantitative and qualitative are two methods used to assess organisational safety culture. In this study, the socio-anthropological or academic approach and qualitative method have been selected. This will be discussed in more detail in chapter 4.

In the aviation industry, military and civilian organisations have attempted to conduct safety climate research in their respective organisations. In the military, most of the safety climate research has been conducted in the US aviation military organisations. The safety climate research was triggered by the continuing number of aircraft accidents. Subsequently, the leadership of the US Navy and Marines ordered and challenged their personnel to reduce the number of mishaps (Baker, 1998). Following the order, the Navy and Marines Corps created and implemented several approaches to overcome the mishap problems. One of the approaches was the creation of a Human Factors Quality Management Board (HFQMB). The HFQMB aims to improve aviation safety, which is done by preventing human error, improving human resources through training, and preventing reoccurrence by conducting an analysis of the organisation’s safety climate (Haris, 2000). The Command Safety Climate Assessment Survey (CSCAS), which consists of a Command Safety Assessment (CSA) and a Maintenance Climate Assessment Survey (MCAS), are used as tools to assess and measure the safety climate of the US Navy and Marines Corps, mainly the individual squadrons (Baker, 1998; Haris, 2000; Adamshick, 2007). The CSCAS enable squadron commanders or commanding officers to gain insight into the attitudes of their personnel regarding safety (Overton & Frazer, 2013).
According to Adamshick (2007), the CSCAS is a tool that can be used by squadron-level Commanding Officers (COs) to oversee safety-related issues of their aircrew and maintenance personnel. The COs utilise surveys to obtain real-time perceptions and attitudes of their personnel. Next, the COs take actions to rectify any safety issues as soon as these are identified. The CSCAS is expected to identify any potential latent condition that can lead to an incident or accident; in this way, the COs can prevent reoccurrence. As mentioned in the paragraph above, the CSCAS comprises the CSA and the MCAS. The CSA is utilised to assess an organisation’s safety perspective on operational practices, or in other words, it focuses on organisational impacts relating to aircrew safety issues (Harris, 2000). On the other hand, the MCAS is utilised to assess the organisation’s safety perspective regarding maintenance practices. Both CSA and MCAS were based on the Model of Organisational Safety Effectiveness (MOSE) (Harris, 2000; Adamshick, 2007).

MOSE consists of five major areas that significantly affect the effectiveness of Naval aviation activities (Adamshick, 2007). Those five major areas are:

- Process auditing: a system that continuously identifies potential hazards and remedies safety issues.
- Reward system: a system that recognises the safe behaviour and disciplinary actions of a person in order to promote safe behaviour and remedy unsafe behaviour.
- Quality and control: a set of procedures and policies to generate high-quality work performance.
- Risk management: a strategy for identifying hazards and controlling operational risk systematically.
- Command and control: the arrangements of leadership effectiveness, organisation’s safety climate, and the policies and procedures for managing flight operations and safety.
The Navy and Marines Corps have conducted research on safety climate using both methods. Desai et al. (2006), Adamshick (2007), and Buttrey et al. (2010) conducted research on the US Naval aviators. Desai et al. (2006) conducted research on 147 US Naval squadrons; while, Adamshick (2007) conducted research on the US Navy Strike-Fighters aviators from 2001 until 2005. Furthermore, Buttrey et al. (2010) conducted research on the US Navy and Marine Corps aviators. All the researchers utilised the CSA, and five categories were used to measure the safety climate.

On the other hand, Baker (1998), Oneto (1999), Goodrum (1999), Haris (2000), Stanley (2000), Hernandez (2001), and Brittingham (2006) conducted research on several US Navy and Marine Corps units. The purpose of the research was to measure the safety climate of the units from the perspectives of maintenance crews. There is evidence to suggest that maintenance issues can trigger incidents and accidents. All the researchers utilised the MCAS in their researches and measured the five MOSE categories to gauge the organisations’ safety climate.

In civilian aviation, a few researchers have also conducted research on safety climate. The researchers utilised a quantitative approach, survey, to measure the organisations’ safety climate. Unlike the military research where researchers focused only on aircrews and maintenance personnel, the scope of the research on civilian operator has been much broader, encompassing civilian aviators, cabin crew, ground handlers, and air traffic controllers. Gibbons et al. (2006) and Evans et al. (2007) conducted research on civilian aviators, including those in regular public transport, charter flights, and aerial-work. The studies were conducted in the USA and Australia. In order to gauge the safety climate, the researchers measured eight different aspects: management commitment and communication, safety training, equipment and maintenance, organisational commitment, operations personnel, informal safety system, formal safety system, and compliance.
Kao et al. (2009) conducted research on cabin crew in Taiwan. They measured five categories to determine the safety climate: management’s commitment to safety, cabin work environment, rule compliance, crew member involvement and participation, and accident investigation. Regarding civilian aviation ground handlers, Diaz and Cabrera (1997) and Ek and Akselsson (2007) investigated three Spanish companies and a Swedish aviation ground handling company respectively. Diaz and Cabrera (1997) studied the safety climate by measuring five categories: company policies on safety, emphasis on productivity versus safety, specific strategies of prevention, safety level perceived at the airport, and safety level perceived on the job. Ek and Akselsson (2007) investigated the safety climate by measuring nine categories: work environment, communication, learning, reporting, fairness, flexibility, attitudes towards safety, safety-related behaviours, and risk perception. Gordon et al. (2007) undertook research on the safety climate related to European air traffic controllers. In their research, Gordon et al. measured seven categories: communication/consultation, support from others, organisational support for safety, reporting, resources, organisational safety learning, and responsibility for safety.

The researchers mentioned above utilised the same quantitative approach, that is the survey. Although they have some categories in common, the researchers used different categories/aspects to measure the safety climate. In other words, there is no consensus regarding the categories or aspects that can be generalised to an organisational safety climate. Buttrey et al. (2010) pointed out that a safety climate survey, using a safety climate questionnaire, is a useful tool for obtaining a “snapshot” of the current state of safety of an organisation at a particular moment in time. Moreover, it can be used to identify in advance the safety issues that could lead to a potential incident or accident. Although safety climate research has made some valuable contributions, it still has not provided an in-depth understanding of organisational culture. The safety climate research did not reveal the basic assumptions or
beliefs of the organisation as it only analysed the perceptions of the employees regarding safety performance within their institutions at a particular point in time.

3.6.4 Dimensions of Safety Assessment

As a proactive measure, many organisations have conducted safety assessment in order to discover the organisational safety level, which could be used to improve their safety before incidents or accidents occur (Antonsen, 2009). After reviewing the literature on safety research from many different industries, Flin et al. (2000) concluded that three core themes (management, risk and safety arrangements) have repeatedly emerged and that other dimensions (work pressure, competence and procedures) emerge less frequently in safety climate assessments.

Flin et al. (2000) found that management refers to perceptions of management in regard to safety as well as other issues such as production, planning, etc.; risk relates to workers’ perceptions and attitudes towards risk and safety on the worksite; safety arrangement refers to different aspects of an organization’s safety management systems; work pressure relates to workload and work pace; competence refers to worker’s knowledge, skills, and qualifications; and procedures relate to workers’ perceptions of and attitudes toward rules and compliance with or violation of procedures.

3.7 Conceptual Framework

According to Eurocontrol (2008), an SMS and a safety culture are two interdependent entities. An SMS is the representation of the proficiency to achieve safety while safety culture refers to the commitment to achieve safety. By adopting Reason’s safety culture model and the key
factors of an SMS and then applying it to the relationship between them, this study has developed a conceptual framework as depicted in Figure 7.

Based on the conceptual framework above, it is argued that the inter-relationship between the two interdependent entities will result in safety. However, cultural factors, to some degree, have critical influences on this inter-relationship. As each culture is unique, it is reasonable to assume that the characteristics of Indonesian national and military organisational cultures can hinder or support the implementation of the SMS and the promotion of safety culture. This study examines the characteristics of the Indonesian national and military organisational culture and how these cultural factors influence an organisation’s safety culture and the implementation of the SMS.

3.8 Summary

Indonesia, like many other societies, applies its own cultural values orientation and approaches when dealing with uncertainties. Even though Indonesia comprises many tribes, ethnic groups, religions and languages, Javanese culture is considered culturally and politically dominant in
Indonesia. Some of the prominent characteristics of the Indonesian national culture that are influenced by Javanese culture include respect for social hierarchy, valuing communal harmony and holding it in higher esteem than individual rights, collectivism, harmony in life, respect for older people, and humility and politeness while demonstrating the correct behaviour.

On the other hand, the substance of an organisation culture, which is an organisation’s ideologies, have been significantly influenced by the various environments such as transnational cultures, national cultures, regional and community cultures, industry culture, occupational culture, and other organisations’ cultures. Like any other organisation, the military has its own distinct culture which is formed and influenced by several factors such as the unique requirements of its workplace, the resources devoted to national defence, the way it is organised and conducts its missions, history, geography, the professional ethos, recent military experience, and the environment within which the organisation operates. Furthermore, the military culture is characterised by discipline, professional ethos, the ceremonies and etiquette, cohesion and esprit de corps, authoritarian structure, class system, the importance of the mission, and preparation for disaster.

This chapter also discussed organisational accident which is regarded as an accident that occurs due to the breach of a safety defence system caused by a combination of unsafe acts and unsafe conditions. In order to prevent accidents, an integrated safety defence system - the Safety Management System (SMS) - was developed and introduced. However, the SMS will not work if the organisation does not possess a positive safety culture. An organisation possesses a good safety culture if it has an informed culture. The sub-components of an informed culture are reporting culture, just culture, flexible culture, and learning the culture. However, the promotion of a safety culture and the implementation of the SMS are influenced by the national and organisational cultures, as shown in the conceptual framework.
CHAPTER 4

METHODOLOGY

The previous chapters examined the relevant literature on the existing theory of culture, national culture, organisational culture, safety culture, and the conceptual framework of this study. This chapter explains and justifies the research method employed in this study. This chapter begins with a discussion of the research approach. The research paradigm and the rationale for selecting a qualitative method are presented in sections 4.3 and 4.4 respectively. Section 4.5 describes the research design of the study that comprises the selection of unit of analysis and the data collection process. Next, section 4.6 discusses the research setting that consists of procedures prior to data collections and the selection of research participants for this study. Six phases of thematic analysis are described in section 4.7, while section 4.8 discusses the techniques used to increase the validity and reliability of this study. Section 4.9 addresses the ethical considerations of this study. Lastly, section 4.10 presents the summary of this chapter.

4.1 Introduction

According to the Cambridge Online Dictionary (2017), research is defined as “a detailed study of a subject, especially in order to discover (new) information or reach a (new) understanding”. It is necessary for a researcher to structure and design a research project in such a way that data can be collected, sorted and analysed in order to reach conclusions regarding the phenomenon being studied. Walliman (2010) argues that the researcher’s objective and the nature of the research problem determine type of research and design that are appropriate and should be chosen. Creswell (2013) stated that a research approach (whether a qualitative, quantitative, or mixed-methods approach) should be selected when the researcher plans to conduct a research.
Moreover, the selection of the research approach is influenced by several factors such as a worldview or research paradigm or assumption about research, research design, and research methods (Creswell, 2013; Bryman and Bell, 2011; Walliman, 2010).

This study employs a qualitative approach, encompassing multiple case studies. The qualitative approach allows the researcher to explore and understand the meaning of a human or social problem concerning individuals or groups which are framed through the medium of language, that is, the use of words (Creswell, 2013; Beuving and Vries, 2014). Since the main purpose of this study was to examine the influence of cultural factors on safety, a qualitative research approach was appropriate as it allowed the researcher to immerse himself in a group of people or a sector of society with as little as possible interference in the situation. The selection of the qualitative approach for this study was based on several considerations that will be discussed in this chapter. The following sections discuss the research approach, research paradigm, research design and research methods of this study.

4.2 Research Approach

There are three kinds of research approaches: quantitative, qualitative, and mixed-methods approaches. However, this section discusses only the quantitative and qualitative approaches since the mixed-methods approach combines elements of both the quantitative and qualitative approaches (Creswell, 2013). The differences between qualitative and quantitative approaches have been discussed by many scholars (Creswell, 2013; Bryman and Bell, 2011; Walliman, 2010; Flick, 2014; Hancock et al., 1998; Beuving and Vries, 2014; Ryan, 2006). For example, Bryman and Bell (2011) argued that qualitative research is a research strategy that emphasises data collection and analysis and results are presented in the form of words rather than numerically. They also believe that qualitative research uses an inductive approach in regard to the relationship between research and theory. Creswell (2013) asserted that in qualitative
research, a researcher collects data in the participant’s setting, and then the data is analysed inductively from specific to general themes. Hence, the meaning of the data depends on the interpretation of the researcher.

On the other hand, Bryman and Bell (2011) stated that quantitative research is a research strategy that involves data collection and the results of analysis are presented as numbers. The relationship between theory and research is a deductive one, so the aim of the research is to test objective theories (Bryman and Bell, 2011). Creswell (2013) explains that the testing of objective theories is conducted by investigating the relationship among variables which can be measured, and statistical procedures are used to analyse numerical data. Another discussion that distinguishes qualitative from quantitative approach was presented by Hancock et al. (1998) and is summarised in Table 4 below.

Table 4. Comparison between Qualitative and Quantitative Approaches

<table>
<thead>
<tr>
<th>Qualitative</th>
<th>Quantitative</th>
</tr>
</thead>
<tbody>
<tr>
<td>tends to focus on how people or groups of people can have (somewhat) different ways of looking at reality (usually social or psychological reality)</td>
<td>tends to focus on ways of describing and understanding reality by the discovery of general “laws”</td>
</tr>
<tr>
<td>takes account of complexity by incorporating the real-world context – can take different perspectives on board</td>
<td>takes account of complexity by precise definition of the focus of interest and techniques that mean that external “noise” can be discounted</td>
</tr>
<tr>
<td>studies behaviour in natural settings or uses people’s accounts as data; usually no manipulation of variables</td>
<td>involves manipulation of some variables (independent variables) while other variables (which would be considered to be extraneous and confounding variables) are held constant</td>
</tr>
<tr>
<td>focuses on reports of experience or on data which cannot be adequately expressed numerically</td>
<td>uses statistical techniques that allow us to talk about how likely it is that something is “true” for a given population in an objective or measurable sense</td>
</tr>
</tbody>
</table>
focuses on description and interpretation and might lead to development of new concepts or theory, or to an evaluation of an organisational process

focuses on cause & effect - e.g. uses experiment to test (try to disprove) an hypothesis

employs a flexible, emergent but systematic research process

requires the research process to be defined in advance

Source: Hancock et al. (1998, p.6)

In addition to the above differences, several other features distinguish the qualitative from the quantitative approach. The sampling process in qualitative research is not the same as the sampling process in quantitative research since the aim of qualitative research is not to generalise at statistical level – as an alternative, the qualitative research employs strategic or purposive sampling (Hancock et al., 1998). Hence, Hancock et al. (1998) stated that random sampling or probability-based sampling for the collection of data for qualitative research is inappropriate. Bryman and Bell (2011) argued that another feature that differentiates qualitative from quantitative research strategy is epistemological and ontological orientations. They contend that epistemological orientation of qualitative research is interpretivism whereas the quantitative approach is a natural science model, in particular positivist; and the ontological orientation of qualitative research is constructivism while quantitative research is objectivism.

4.3 Research Paradigm

The term ‘worldview’, also known as a paradigm or epistemology and ontologies or broadly conceived research methodologies, is defined as “a general philosophical orientation about the world and the nature of research that a researcher brings to a study” (Creswell, 2013, p. 35). The research paradigm can be considered as the way that the researcher understands reality, where overall conceptual frameworks and a basic set of beliefs within a particular group will
guide the researcher’s acts and behaviour when investigating the world (Lincoln and Guba, 2013; Walliman, 2010; Jonker and Pennink, 2010; Creswell, 2013; Healy and Perry, 2000; Ryan, 2006). Worldviews are influenced by several factors: discipline orientations, researchers’ inclinations, and past research experience (Creswell, 2013). Moreover, Creswell (2013) posited that worldviews held by individual researchers will often determine whether they will select a qualitative, quantitative, or mixed-methods approach.

There have been ongoing debates regarding paradigms or worldviews. However, two prominent paradigms have emerged and dominated the social and management sciences: positivist and phenomenological or interpretivist (Taylor, 2015; Jonker and Pennink, 2010). Several scholars (Creswell, 2013; Bryman and Bell, 2011; Walliman, 2010; Flick, 2014; Hancock et al., 1998; Beuving and Vries, 2014; Jonker and Pennink, 2010; Taylor, 2015) have attempted to identify the characteristics of positivism and interpretivism or constructivism. Jonker and Pennink (2010, p.23), for instance, contended that positivism and constructivism “can be typified by the distinction between ‘knowing through the researcher’s eyes’ or ‘knowing through somebody else’s eyes’”. Moreover, Healy and Perry (2000) argued that positivism and constructivism can be distinguished by examining their ontology (the nature of reality), epistemology (the relationship between the researcher and the observed), and methodology (techniques used to investigate reality).

According to Healy and Perry (2000), positivism assumes that a single comprehensible reality can be quantitatively measured using scientific methods. Healy and Perry (2000) believed that positivists are not part of the world they observe thus the data obtained and data analyses are value-free. On the other hand, Walliman (2010) maintained that constructivism (also called as relativism, interpretivism, idealism or even constructionism) assumes that reality is a creation of the mind which is influenced by the individual’s preconceptions, beliefs and values. Constructivists are part of the phenomenon that they observe, and therefore the result
of their study depends on the interpretation and evaluation of the researcher (Walliman, 2010). Table 5 below summarises the distinctions between positivism and relativism.

Table 5. Distinction between Positivist and Relativist / Interpretivist Approaches

<table>
<thead>
<tr>
<th>Issue</th>
<th>Positivist</th>
<th>Relativist</th>
</tr>
</thead>
<tbody>
<tr>
<td>Philosophical basis</td>
<td>Realism: the world exists and is knowable as it really is.</td>
<td>Idealism: the world exists but different people construe it in very different ways.</td>
</tr>
<tr>
<td>The role of research</td>
<td>To discover universal laws and generalizations.</td>
<td>To reveal different interpretations of the world as made by people.</td>
</tr>
<tr>
<td>Role of researcher</td>
<td>Neutral observer.</td>
<td>Part of the research process.</td>
</tr>
<tr>
<td>Theoretical approach</td>
<td>Rational, using inductive and scientific methods and value free data.</td>
<td>Subjective, using inductive methods and value-laden data.</td>
</tr>
<tr>
<td>Methods</td>
<td>Experiments or mathematical models and quantitative analysis to validate, reject or refine hypotheses.</td>
<td>Surveys and observations with qualitative analysis to seek meaningful relationships and the consequences of their interactions. Analysis of language and meaning.</td>
</tr>
<tr>
<td>Analysis of society</td>
<td>Search for order. Society is governed by a uniform set of values and made possible only by acceptance of these values.</td>
<td>Search for dynamics. Multitude of values leading to complex interactions. Society made possible by negotiation.</td>
</tr>
</tbody>
</table>

Source: Walliman (2010, p. 22-23)

4.4 Rationales for Qualitative Research

One of the methods commonly used for safety assessment is the survey or questionnaires, with over 50 different safety survey instruments having been developed and currently in use (Patankar et al., 2012; O’Connor et al., 2011). As mentioned earlier, there have been numerous
aviation safety research studies in civilian (e.g. Sherman et al., 1997; Merrit, 2000; Gibbons et al., 2006; Evans et al., 2007) and military aviation (Baker, 1998; Oneto, 1999; Goodrum, 1999; Harris, 2000; Stanley, 2000; Hernandez, 2001; Brittingham, 2006; Desai, 2006; Falconer, 2006; Adamshick, 2007; Soeters and Boer, 2009; Buttrey, 2010). Most of the research attempted to measure the safety culture using quantitative methodology, survey/questionnaires and content analysis, and one study adopted a mixed-method approach. Furthermore, much, if not all, of the safety research in military organisations was conducted in developed countries.

However, Guldenmund (2007) argued that self-administered questionnaires are less useful in organizational culture research because they contribute to measurement error and cannot distinguish between attitudes and perceptions. Antonsen (2009) asserted that a safety culture survey cannot assess the basic assumption of an organizational culture and leaves the researcher to speculate on how to interpret the findings. A lot of valuable information such as people’s beliefs, ideas, emotions, judgements, or feeling of comfort, cannot be converted to numbers nor manipulated mathematically – they have to be described in words as these record qualities (Walliman, 2010). Furthermore, research has revealed that another potential disadvantage of quantitative research is that people do not accurately express the truth about themselves or are biased when responding to surveys, questionnaires, and examinations (Creswell, 1998; Hancock and Algozzine, 2006). The questions asked in a survey or questionnaires may be inconsistent with the prevailing culture of the organisation as it may reflect only the consultant/manager’s values (Ogbonna, 1992). Beuying and Vries (2014) asserted that another factor that can cause bias in the research findings is the potential for creating an artificial research situation since the researcher is able to control and manipulate the research circumstances. In addition, Batteau (2002) argued that the textbook models of management, used as the reference for creating the questionnaires/survey that describe an ideal management for flight operation, are based on Western concepts of management. The adoption
of Western concepts of management by other cultures can pose some potential challenges since there will be differences in norms, values, and beliefs.

The concept of culture from the anthropological perspective comprises to four basic terms: similarities and differences, uniqueness and identity, negotiation, and diversity and nuance (Batteau, 2002). Batteau (2002) elaborated that cultural similarities and differences refer to closeness or distinction from other groups which can create uniqueness and identity and provide a certain nuance. However, the use of quantitative methods to conduct safety culture assessment has several disadvantages. Some of these disadvantages are: loss of the cultural understandings of dialogue, uniqueness and nuance when applying numerical indices of culture; and failure to understand the various modes through which culture shapes, guides and sets limits on behaviour (Batteau, 2002).

Conversely, Hancock and Algozzine (2006) contended that by using qualitative research, the researchers will be able to acquire a better understanding of and actual information about the current situation primarily from the participants’ perspective. Basically, qualitative research provides researchers with a better understanding of a particular social event, group, role, situation or interaction (Creswell, 2003). Furthermore, qualitative researchers place more emphasis on understanding the uniqueness of each individual and context, and the complex interrelationship that exists among all entities (Stake, 1995). Case study, as one of the specific types of qualitative research (Hancock and Algozzine, 2006; Creswell, 2013), offers a research approach that enables researchers to acquire an in-depth understanding of the doers, behaviours, sentiments and interactions for a certain period of time and space (Woodside, 2010; Hancock and Algozzine, 2006). Yin (2009) argued that a case study research requires examining a contemporary phenomenon without researcher intervention or within its natural context using artefacts, documents, observations, and interviews as multiple sources of data. A qualitative or naturalistic researcher presents him/herself naturally and can neither control nor
manipulate a research situation (Beuying and Vries, 2014). Case study research is justified when the research is using “how” and “why” types of questions (Bonoma, 1985; Benbasat et al., 1987; Barratt et al., 2010; Baxter and Jack, 2008).

Based on the review of the available literatures and all issues that have been discussed above, it is argued that safety culture research, especially on military aviation organisations, requires an alternative approach, although there has been one aviation safety research that applied a mixed-methods methodology (survey and interview). Nevertheless, Patankar et al. (2012) argued that safety survey questionnaires should be conducted over several years, so it is possible to determine a safety climate trend for the specific factors that are measured by the instruments. Otherwise, a safety climate that is conducted episodically will serve only as a snapshot of the prevailing opinions and attitudes of an organisation at a certain period of time. Due to time constraints, the mixed-methods approach was not used in this study. Therefore, safety culture research on military aviation still requires an alternative approach, that is, a qualitative approach can assess and provide a better insight into an organization’s safety process and performance. Hale (2000) indicated that research on safety culture in the steel and construction industries demonstrated that qualitative research is able to reveal the basic assumptions of the relevant people within organizations and the impacts they have on safety.

In addition, there are other rationales that support the selection of a qualitative approach for this study. First, a qualitative approach is suited to exploratory research, where the specific topic is relatively new and there has been no previously published research (Myers, 2009), and a study that explores situations in which the result of interventions of a program has no clear outcome (Baxter and Jack, 2008). The nature of this study is exploratory since not only did most of the previous safety culture research employ survey questionnaires, but also the research has not focused on developing countries such as Indonesia that have a different culture. Using survey questionnaires for a safety culture study is believed to be inadequate for delivering an
in-depth analysis of the impacts of cultural factors on military aviation safety. Moreover, the influence of cultural factors, specifically the Indonesian national and military organisational cultures, on the adoption and implementation of the SMS and the promotion of a safety culture has not been studied. The lack of qualitative-based studies about safety culture and the impacts of cultural factors on aviation safety have encouraged the researcher to conduct a research that will contribute to the literature.

Second, the adoption and implementation of the SMS in the military, especially the Indonesian military, is relatively new and there is a need to acquire more detailed information regarding perspectives and experiences about its application. The SMS is intended to be an intervention program to eliminate the occurrence of preventable accidents and to improve the safety of the organisation. Furthermore, prior safety culture research tended to focus more on the management perspective rather than the cultural perspective. An in-depth understanding of the influence of cultural factors on the implementation of the SMS and the promotion of safety culture is required to better appreciate the complexities within the Indonesian military context. This research was an attempt to acquire information about the military personnel’s experiences and perceptions of the SMS implementation. It is crucial to examine the perception and experience of the implementation of the SMS, because it provides better insights and understandings about cultural factors that may inhibit or support the application of the safety program. A cultural study has to be conducted in a natural setting where human behaviour and events occur naturally without interventions and manipulations. This study employed an interpretive research approach to understand the phenomenon of interest.

4.5 Research Design

Bryman and Bell (2011) argued that two of the critical elements of research are the choices of research design and research method. They posited that researchers are required to have a
research design because it will provide a framework for the collection and analysis of data. The framework defines the research and enables the researcher to answer the research questions (Hancock and Algozzine, 2006). Furthermore, researchers use the research method as a technique to collect data (Bryman and Bell, 2011). Given the uniqueness of military organizations, this research employed a qualitative research design, encompassing multiple case studies. It is expected that by employing multiple case studies, researchers will be able to compare and clarify the emergent findings whether they are simply idiosyncratic or consistently replicated by several cases (Eisenhardt and Graebner, 2007). Barratt et al. (2010) believed that multiple case studies can enhance external validity and avoid any observer bias. Furthermore, since the purpose of this study was to investigate beliefs, values, and attitudes of people in a military organisation, case study research using ethnographic orientation/design/style was adopted. In other words, this research method allowed the researcher to become immersed in group activities in order to collect multiple data through interviews, observations and analyses of written documents. Multiple data sources are required for case study research as they will provide stronger substantiation of proposition and construct, and increased reliability of data (Eisenhardt, 1989; Barratt et al., 2010).

In the context of aviation, the anthropological approach to culture has only just started to develop (Falconer, 2006). With respect to the ethnographic approach in aviation, Mindell and Mirmalek (2011) defined ethnography as a research technique adapted from anthropology which is able to provide insights into human and non-human actors in complex technological systems. The extended researcher-engagement characteristic of ethnography, including participatory, collaborative, observational and other techniques, can provide rich insights enabling a better understanding of the reality of workplaces (Pink et al., 2010). Taking an anthropological approach characterised as an ‘interpretive science in search of meaning’ (Geertz, 1973), ethnographic methods can be used to solve some of today’s aviation industry
problems. Since most of the studies of organisations have been carried out mostly in Western environments (Guldenmund, 2000) and the generalisation of the Western concept of management can be problematic (Batteau, 2002), the ethnographic approach offers a different perspective on multiple aviation stakeholders (regulators, operators, flight crews, ground crews, etc.) and a better understanding of the inherent of flying (Batteau, 2002). Moreover, the approach can disclose the value of bureaucracy or the value placed on technology or the value of safety that can be interpreted differently by others who have non-Western concepts of management, and reveal potential impacts on safety that the cultural differences have within an aviation industry (Batteau, 2002).

According to Yin (2009), the first element of a research designs is the study’s question or initial research question. Initial research questions are important when conducting research (Eisenhardt, 1989). As Mintzberg (1979) asserted well-defined research questions can assist researchers to focus on collecting particular data in a systematic manner. Without a research focus, researchers can easily be overwhelmed by the volume of data (Eisenhardt, 1989). This study attempted to investigate how cultural factors (national and military organisational culture) influence aviation safety and provide comprehensive research outcomes; the research design is summarised in Figure 8 below.

Figure 8. Research Design
As shown in Figure 8, the initial research questions were used to guide the research process. The research adopted multiple case studies and utilised various techniques to gather data comprising observations, analyses of written documents and semi-structured interviews. While conducting observation and analysis of written documents, the researcher also conducted unstructured interviews to clarify ambiguous phenomena and data respectively. It was expected that researcher would obtain some significant findings and draw valuable conclusions.

4.5.1 Unit of Analysis

While single-case research can provide an in-depth description of a phenomena, multiple case studies provide more accurate, better grounded and more generalizable theory (Eisenhardt and Graebner, 2007). Eisenhardt (1989) argued that the selection of cases is critical when conducting multiple case studies research. Furthermore, she suggested that the selection of four to ten cases will provide researchers with sufficient data; if researchers select fewer than four cases, they will have difficulties in capturing the real world; whereas, selecting more than ten cases will provide researchers with abundant data which however, can create problems in processing the information.

Therefore, researchers should carefully select cases that will provide them with rich information. Bonoma (1985) proposed that the cases which are selected should inherently contain problems for individual analysis and can be used to stimulate further thinking. In addition, Yin (1984) and Bensabat et al. (1987) suggested that the cases should meet two criteria: first, they can be predicted to produce similar results, so it might be used as “literal replication”; second, the cases may be used for “theoretical replication” which means that contradictory results may emerge.

Taking into account those recommendations, this research selected four case studies. Four air operational units were selected for this study and each unit represented one case study.
Since the Indonesian military operates many types of aircraft, including rotary and fixed-wing aircraft (propeller and jet engine), each unit that participated in this study represents those populations. Moreover, the selection of the units was based on their aviation safety records during the last five years. The selection of cases was carefully done in order to gather comprehensive results. Furthermore, this research applied several criteria for the cases as follows:

- The sample units comprise various units that operate different types of aircraft such as fighter aircraft, transport aircraft and helicopters;
- The sample units have adopted and implemented the Safety Management System (SMS);
- The sample units’ members have different qualifications and positions such as air crews (pilot, navigator, and engineer), ground crews (maintenance, ground support) and the flying support division.

4.5.2 Data Collection Technique

According to Patankar et al. (2012), cultural values can be revealed by dialogue (interview) and observation (including artefacts analysis). They believed that any discrepancy between the espoused values, or the published values that appear on report and artefacts, and the enacted values, or values that people experience when working in their organization, can be disclosed through interviews and observations. The primary data for this research were collected through semi-structured interviews, observations and unstructured interviews, and the analysis of written documents and unstructured interviews. The data collections were conducted concurrently, that is, the interviews, observations and analysis of written documents were carried out during the researcher’s fieldwork.
Regarding the observation, the researcher informed those who agreed to participate that he would be observing them over a one-week period. The observation would begin at the start of the working day, i.e. at 7 am and continue until the end of the working day, i.e. at 3 pm. The researcher followed from a distance and observed the participants as they went about their daily tasks. In this particular scenario, and according to the research ethic, the researcher acts fully as an observer who will leave the work area in the event that a situation arises that involves risk to the participants and the researcher. Although the researcher observed and followed the participants from a distance, any uncertainties could still be clarified by the participants during the unstructured interviews.

The data comprising written documents was collected by an examination of the units’ annual reports, safety reports, safety manuals, and other related documents. Similar to observations, the researcher was able to clarify any ambiguity that arose during the examination of written documents to the participants through unstructured interviews.

Another method of data collection is the semi-structured interview. The purpose of the interview is to acquire rich and personalised information (Mason, 2002). Open-ended questions were used for the semi-structured interviews conducted for this research. Open-ended questions offer advantages for both interviewer and interviewee since they allow both parties to discuss several topics in more detail and the interviewer has the opportunity to encourage the interviewee to elaborate on an initial answer (Hancock et al., 1998). As suggested by Crabtree and Miller (1999), in order to increase validity and reliability, the semi-structured interview not only used an open-ended communication style but also was guided by an interview protocol which was designed by the researcher and used to guide the interviews. This enables the interviews to remain focused on the research topic and the researcher is able to acquire important information that is relevant to the research questions.
The interviews were conducted face to face in a designated room and at an allocated time when the participants were not on duty. It was expected that by providing a designated room for interviews the participants would be encouraged to be more responsive, critical, and transparent when answering questions. In addition, the purpose of an allocated interview room was to prevent any distractions such as the presence of other people when the interviews were in progress. In order to acquire in-depth information about the topic of interest and avoid misunderstanding the questions being asked, the interviews were conducted in the participants’ native language, Bahasa Indonesia. The researcher recorded interviews using an iphone, and each interview lasted between thirty minutes to one hour. Each recorded interview was coded chronologically in order to easily track the data. Next, all interviews were transcribed into a Microsoft Word document, and then the relevant transcript was sent to each respective interviewee via email to confirm the accuracy of the interviews. Interviewees raised no objections regarding the accuracy of the interview transcripts and all were confirmed.

4.6 Research Settings

By nature, employing qualitative approach means “understand and explain the meaning of social phenomena with as little disruption of the natural setting as possible” (Merriam, 1998). Hancock and Algozzine (2006) asserted that in a case study research, as one type of qualitative research, the researcher studies a phenomenon in its natural context that is confined by time and space. The fieldwork for this study was arranged to enable the researcher to become immersed in a unit’s activities for a specific period of time. This enabled the researcher to observe members of the units during their daily activities conducted in their natural work environment or everyday situations from the beginning until the end of the working day. The presence of the researcher was not intended to distract the participants or make them feel any sense of interference. Moreover, the natural setting enabled the researcher to have casual social
interaction with the units’ personnel and to assess events that occurred during a certain period of time and place, such as meetings, work activities, and the like.

4.6.1 Procedure

The preparation for the data collections started with the researcher contacting a high-ranking officer/senior officer, who acted as the authorised officer, at one of the Indonesian Armed Forces Headquarters several months prior to the commencement of the fieldwork. Following that contact, the researcher sent an official letter requesting permission to conduct aviation safety research on Indonesian military units. After approval from headquarters had been granted, the researcher began contacting units via email and telephone, inviting them to participate in this study. The researcher then engaged in closer contact with those units that had expressed an interest in participating in this study. Then, the researcher and the participating units discussed the availability of the units and other matters in regard to the fieldwork.

In accordance with the Indonesian military organisational structure, an air base consists of many operational units and is commanded by an air base commander. An air base commander is responsible for the operations and administrations of all units within his boundary. In line with a military custom, the researcher personally visited each base commander to explain the research that would be carried out in units under their respective commands – emphasising that the research was being conducted for academic purposes only. Then, the researcher met the commanding officer (CO) of the participating units and discussed all aspects of the fieldwork. Subsequently, the researcher began the data collection process.
4.6.2 Research Participants

The careful selection of research participants was crucial in this study. Participants’ knowledge and opinions are essential sources of data since they may provide important insights concerning the topic being studied (Hancock and Algozzine, 2006). The fieldwork began with the researcher observing each unit’s work environment and he approached several people to discuss their daily activities in the workplace. The initial approach was intended to identify personnel who had more knowledge and experiences regarding their unit’s safety system, which would enable them to better answer the research questions. After a random and thorough selection of participants, twenty-seven Indonesian military personnel from four different military units were selected to participate in this research. The participants came from various backgrounds in terms of their qualifications and positions. Hence, the participants comprised aircrews (pilots, flight engineers, maintenance crews and radio operators) and ground crews (mechanics, maintenance and ground crews), various ranks ranging from Non-Commissioned Officers (NCO) to officers, and their respective positions. All officers involved in this study graduated from the Indonesian Air Force Academy while non-officers only attended basic military training. Regarding participants’ tribes: eleven participants were Javanese, five participants were Sundanese, two participants were Acehnese, two participants were Betawi, three participants were Bataks, two participants were Betawis, one participant was Balinese, and one participant was Buginese. Furthermore, on average, participants had over ten years’ experience in the service with the youngest officer having served for seven years, and the most senior officer, who participated in this study, had been in the service more than twenty years. This range of participants allowed the researcher to acquire invaluable information and data from numerous perspectives enabling him to answer the research questions. In this study, there was no female soldier in the Indonesian air force (Wanita Angkatan Udara) involved. Most of the female soldiers in the Indonesian air force work as administrative staff and there are only
few who work in the operational units. Since there was no any female soldier worked in the participating units, the woman was not involved in this study.

4.7 Data Analysis Method

A qualitative study produces vast amounts of data that can come in various forms: transcription of recorded interviews or verbatim notes, detailed field notes of observational research, the researcher’s reflective notes, and a diary (Pope et al., 2000). However, those data are still the raw data of the research (Pope et al., 2000) requiring systematic analysis in order to be meaningful and provide a description and explanation of a phenomenon (Hancock et al., 1998). Since qualitative data are very rich and dense and not all the data can be used, an analysis of such data requires the researcher to segment, segregate, and then reassemble the most valuable information (Creswell, 2013). Thus, the researcher needs to focus on the data that are relevant to the research questions. In order to assist researchers with the analysis of qualitative data, scholars (Creswell, 2013; O’Connor and Gibson, 2003; Hancock et al., 2006; Clarke et al., 2015; Braun and Clarke, 2006) have offered several strategies. While the techniques for data analysis proposed by each scholar are slightly different, they have some features in common, which include data preparation/familiarisation, coding development, and generating themes. Thematic analysis was employed in this study following the six phases of analysis proposed by Braun and Clarke (2006) and Clarke et al. (2015).

4.7.1 Data Preparation/Familiarisation

In this study, the data analysis began when the data collection commenced following Merriam’s (1998) suggestion that the collection and analysis of data should be conducted simultaneously. She stated that simultaneous data collection and analysis assists the researcher to focus more
on data that are relevant to the research questions; pay closer attention to certain data, refine and verify the researcher’s assumptions; and reduce the volume of the data that need to be processed. Nevertheless, analysis of the data at this early stage only provides the researcher with some rudimentary analysis which needs to be refined and verified. Subsequently, the researcher is required to organise and prepare qualitative data for advanced analysis.

Transcribing interviews, typing up field notes, and sorting and arranging documents were some of the activities conducted by the researcher during the preparation stage. After that, verbatim transcripts were translated into English by the researcher since all the data were still in the participants’ language. The researcher considered himself to be qualified to translate the original interview data into English. The researcher thoroughly familiarised himself with the data by reading transcripts and listening to the audio recording several times as suggested by Creswell (2013), Clarke et al. (2015), and Braun and Clarke (2006). Clark et al. (2015) recommended that the analyst read the entire data set at least twice. The first reading allows the researcher to absorb the data and obtain a general sense of the information and its overall meaning (Creswell, 2013). Braun and Clarke (2006) asserted that repeated reading of the data allows the investigator to immerse himself in the data, thereby becoming familiar with the breadth and depth of the content. Furthermore, the researcher should make notes when examining data as general ideas and meaning start to emerge.

### 4.7.2 Generating Initial Codes

According to Braun and Clarke (2006, p.88), “codes identify a feature of the data (semantic content or latent) that appears interesting to the analyst, and refer to the most basic segment, or element, of the raw data or information that can be assessed in a meaningful way regarding the phenomenon”. Coding should be conducted in a systematic and rigorous way as it provides a solid foundation for the development of themes (Clarke et al., 2015). Saldana (2009) argued
that a code is most often a word or short phrase that is used to summarise or condense data but not to reduce data. Based on this definition, interview data and field notes can be broken down into codes, in the form of a word(s) or a short phrase(s) that has specific meaning. Moreover, Braun and Clarke (2006) suggested that analyst should consider some factors when coding. First, coding depends on whether the themes are more theory-driven or data-driven – with the latter, it means that the themes depend on the data whereas in the former, the analyst approaches the data with specific questions and codes the data based on those questions. Second, coding depends on whether the analyst aims to code the entire data set or just a particular/limited data set.

In this study, the researcher generated a list of codes before embarking on field work. The list of codes was derived from theory and the literature review. Moreover, the list of codes was used to anticipate the responses of the interviewees and determine whether the research questions, which reflect the researcher’s assumptions, were well formulated. Although the list of codes that had been developed and themes were more theory-driven, the researcher coded the entire data set. This allowed the researcher to identify any interesting aspects of the data that would possibly emerge. The coding was performed manually. Figure 9 below is an example of extracted data with codes applied.

<table>
<thead>
<tr>
<th>Data Extract</th>
<th>Coded for</th>
</tr>
</thead>
</table>
| - “I have to go to my direct supervisor if I have a problem most of the time. I am not allowed to report directly to the Commandant as there is a system in place and I need to obey the rules” | - Report to direct supervisor (chain of command)  
- System in place (procedure)  
- Obey the rules                                                                 |

Figure 9. Example of extracted data with codes applied

Figure 9 demonstrates how the coding was conducted. The researcher extracted and coded a statement from one interviewee. The codes were labelled as this provided an analytical
context for the quote. A code of ‘chain of command’ was labelled to correspond to the participant’s statement, “I have to go to my direct supervisor…” A code of ‘procedure’ was given to the participant’s statement “….as there is a system in place...”. The statement above was a participant’s response when asked to explain the reporting procedure in his unit. The same coding process was applied to the entire data set. Figure 10 below shows some examples of the codes.

<table>
<thead>
<tr>
<th>- Procedure</th>
<th>- Unggah-ungguh</th>
<th>- Teamwork</th>
<th>- Leadership</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Chain of Command</td>
<td>- Dictator</td>
<td>- Gotong royong</td>
<td>- Supervision</td>
</tr>
<tr>
<td>- Rules</td>
<td>- Transparency</td>
<td>- Musyawarah</td>
<td>- Well being</td>
</tr>
<tr>
<td>- Family</td>
<td>- Autocracy</td>
<td>- Education</td>
<td>- Self awareness</td>
</tr>
<tr>
<td>- Respect to older</td>
<td>- Command</td>
<td>- Workload</td>
<td>- Ignore</td>
</tr>
<tr>
<td>- Friendly</td>
<td>- Commitment</td>
<td>- Motivation</td>
<td>- Safety meeting</td>
</tr>
<tr>
<td>- Avoid conflict</td>
<td>- Order</td>
<td>- ABS (Asal bapak senang)</td>
<td>- Authority</td>
</tr>
<tr>
<td>- Keeping Harmony</td>
<td>- Training</td>
<td>- Tolerance</td>
<td>- Responsibility</td>
</tr>
<tr>
<td>- Can-do</td>
<td>- Punishment</td>
<td>- Compromise</td>
<td>- Class systems</td>
</tr>
<tr>
<td>- Superman</td>
<td>- Reward</td>
<td></td>
<td>- etc.</td>
</tr>
</tbody>
</table>

Figure 10. Examples of Codes

4.7.3 Searching for themes

This phase began when all the data had been coded and the researcher had sorted and categorised the different codes according to candidate themes. Next, as suggested by Braun
and Clarke (2006), the researcher collated all the relevant data extracts that had been coded within the recognized themes. For instance, the first theme of this study, characteristics of Indonesian national culture, consisted of several sub-themes such as hierarchical structure, harmony, authoritarian structure, unggah-unnguh, and coping with uncertainty. For hierarchical structure, some codes, that were applied to data extracts, were classified under: a chain of command, direct supervisor, top-down and bottom-up, and senior-junior.

### 4.7.4 Reviewing themes

When searching for themes was completed, the researcher reviewed the identified names. Reviewing and refining themes consist of two levels (Braun and Clarke, 2006). At level one, all the data extracts that have been coded for each theme should be reviewed to ensure that they form a reasonable pattern. As suggested, the researcher reviewed all the collated extracts for each theme and ensured that they had a coherent pattern. Level two has a similar process to that at level one; however, the entire data set must be reviewed. At this level, the researcher reviewed and ensured that the identified themes comprised a coherent pattern of the data extracts that were derived from transcriptions, field notes, and documents.

### 4.7.5 Defining and naming themes

The next phase of thematic analysis is to define and refine the identified themes. According to Braun and Clarke (2006, p. 92):

“By ‘define and refine’, we mean identifying the ‘essence’ of what each theme is about (as well as the themes overall), and determining what aspect of the data each theme captures. It is important not to try and get a theme to do too much, or to be too diverse and complex. You do this by going back to collated data extracts for each theme, and
organizing them into a coherent and internally consistent account, with accompanying narrative. It is vital that you do not just paraphrase the content of the data extracts presented, but identify what is of interest about them and why”.

Moreover, they argued that the analyst must determine whether a theme requires sub-theme, as is the case when a theme is complex and large, as sub-themes can show the structure of meaning within the data (Clarke et al., 2015).

After defining and refining the identified themes, the researcher identified two overarching themes: characteristics of Indonesian national cultures and safety, and characteristics of Indonesian military organisational culture and safety. Within each theme, several sub-themes were identified. These are presented as a thematic map in Figure 11 below.

![Thematic Map](image)

**Figure 11. Thematic Map**

### 4.7.6 Producing Report

The last phase of thematic analysis involves the report. This phase commences after the final themes have been defined and the analyst writes the report. Braun and Clarke (2006) emphasised that the analyst’s report should be logical, coherent, concise, interesting and non-
repetitive across and within themes. In this study, themes and sub-themes will be discussed in more detail in chapters 5 and 6.

4.8 Validity and Reliability

Similar to the quantitative approach, qualitative research requires particular methods which can be used to demonstrate and increase the validity of the study. Yardley (2015, p. 257) argued that “the validity of research corresponds to the degree to which it is accepted as sound, legitimate, and authoritative by people with an interest in research findings”. One of the strengths of a qualitative study is its validity as it determines the accuracy of the findings from the standpoint of the participant, the researcher, or the readers of an account (Creswell, 2013; Creswell and Miller, 2000). Several scholars (Creswell, 2013; Creswell and Miller, 2000; Yardley, 2015; O’Connor and Gibson, 2003; Beuving and Vries, 2014; Merriam, 1998), recognised some common methods for establishing validity in qualitative research. Since it is essential to demonstrate that this research and its findings are credible, this study employed triangulation, member checking, and disconfirming evidence as procedures to increase its intellectual rigor and validity.

According to Creswell and Miller (2000, p. 126) triangulation is defined as “a validity procedure where researchers search for convergence among multiple and different sources of information to form themes or categories in a study”. O’Connor and Gibson (2003) argued that the findings of a study are more reliable when they can be confirmed by different research methods. Their validity is improved when data from independent information sources are triangulated and measure the same thing (O’Connor and Gibson, 2003; Beuving and Vries, 2014, Creswell and Miller, 2000; Merriam, 1998).

In this study, data triangulation was conducted by confirming information that was gathered from interviews, observations, and documents. Regarding the interview itself, the
information obtained from each individual interview was compared and examined to determine whether participants had different or similar attitudes toward specific topics or questions. As the interviewees came from different backgrounds (aircrews and groundcrews) and positions (supervisors and workers) within the organisations, it was necessary to confirm / triangulate interview data from each participant. For instance, responses from pilots regarding the importance of safety in the workplace were confirmed and triangulated with responses from mechanics. Since all participants’ responses were the same, safety was important; hence, it can be concluded that participants considered safety to be crucial in their workplace.

Data triangulation was also conducted by comparing interview data with observation data (field notes). Participants’ responses regarding a particular topic were confirmed through observation of their actions / behaviour in their workplace. For example, the participants believed that one of the means of achieving safety was to wear appropriate protective equipment such as helmet, safety goggles, and other equipment that is designed to protect a person’s body from infection and injury. During the observation period, it was confirmed that the participants wore their protective equipment while working.

Another procedure for data triangulation was conducted by confirming interview data with document analysis and observation. Several documents such as each unit’s safety report, safety manual, standard operating procedures (SOP), emergency response plan, and other safety-related documents were analysed and confirmed with interview data. For example, a unit safety officer explained that unit personnel must report every potential hazard through the unit’s chain of command and fill out a hazard form. After scrutinising a unit safety manual, it was confirmed that unit personnel were required to fill out a hazard form and report any potential hazard to his direct supervisor. This was also confirmed during the observation period when a member of the unit found a foreign object damage (FOD) during a walk-around program. A walk-around program is a program that runs twice a week and requires all unit
members collectively to inspect and look for objects; such stones, screws, steel wire, and other objects that can endanger the flight operation inside the unit hangar and apron. The person reported the finding, a steel wire, to his direct supervisor. However, he did not fill out a hazard form since the steel wire was very small.

The second procedure for establishing validity in this study is by means of member checking. According to Creswell (2013, p. 251), member checking is used to “determine the accuracy of the qualitative findings through taking the final report or specific descriptions or themes back to participants and determining whether these participants feel that they are accurate”. Creswell and Miller (2000) posited that member checking is one of the important techniques for establishing credibility from the perspective of participants. In member checking, the researcher is not required to send the raw transcripts to participants to check for accuracy – instead, the researcher sends some parts of the polished or semi-polished product such as the themes, the major findings, the cultural descriptions, and the case analysis (Creswell, 2013; Creswell and Miller, 2000). Subsequently, participants are expected to provide feedback and comments on the accuracy of the data, which the researcher will then incorporate into the final narrative. As the participants have an opportunity to provide feedback to both data and the final narrative, the participants add credibility to the qualitative research (Creswell and Miller, 2000).

In this study, the researcher began the member checking procedure from when the data collection (interviews) commenced. During each interview, every ambiguous response was clarified by asking the participants to repeat and elaborate on their statements. Moreover, the researcher gave a brief conclusion after each individual interview and asked for feedback or comments from the participants. The purpose of clarifying ambiguous responses and making a brief summary is to ensure that the researcher and the participants have the same perspectives and interpretations. Member checking continued after the researcher had finished transcribing
the interview data, in which the researcher emailed the interview data (transcription) to each respective participant. The researcher asked the participants to examine the transcriptions and provide feedback or comments regarding whether these accurately reflected their opinions. While some participants gave additional feedback, the majority of participants agreed and did not have any objection regarding the interpretation and content of transcriptions. Subsequently, additional comments were incorporated into the final transcriptions. Having completed the member checking procedure, the researcher believed that the interview data had adequately and accurately reflected the participants’ opinions and were acceptable for analysis.

The third strategy for establishing the validity in this study is disconfirming evidence. According to Yardley (2015), the process of identifying the themes and patterns within the qualitative data is influenced by the aims, assumptions, and interests of the researcher. Once the themes or categories and patterns have been established, the investigator will sift through the data for evidence that disconfirms or is consistent with these themes (Creswell and Miller, 2000; Yardley, 2015). Discussing information that contradicts the general themes will improve the credibility of the study as the findings become more valid and more realistic (Creswell, 2013).

This study involved participants with different backgrounds and positions. It was expected that there would be some disagreement in terms of attitudes or ideas between the members of the units. Moreover, this research also employed various research methods. It was predicted that the data obtained from one method would be different from others. For example, all participants contended that safety was important and believed that complying with safety instructions, regulations and procedures was one of the critical ways to achieve safety. However, the researcher observed a member of one unit who broke the safety rules by smoking under the ‘no smoking’ sign. This demonstrated that the statement about safety being very important in their workplace was not entirely sincere because a unit member’s action clearly
showed the opposite. Therefore, it could be concluded that safety, for some members of the units, served as a slogan only and the safety awareness of those members was low.

In addition to validity, reliability is also used to demonstrate the trustworthiness and rigour of qualitative research (Roberts et al., 2006). Long and Johnson (2000) asserted that qualitative research must be accessed for its reliability to ensure that the findings of the study are accurate, the method is sound, and the research reaches some reasonable conclusions. Many scholars (Pope et al., 2000; Long & Johnson, 2000; O’Connor & Gibson, 2003; Roberts et al., 2006; Yin, 2009; Bryman & Bell, 2011) have discussed reliability in qualitative research. Reliability can be achieved when a researcher consistently maintains consistent efforts during data collection and analysis of the findings (O’Connor & Gibbon, 2003). Most scholars believe that reliability refers to the consistency of a measuring instrument. According to Yin (2009), the objective of reliability in research is to ensure that the same conclusions and findings will be obtained by a later researcher who follows the same procedures as those described by an earlier researcher. According to Bryman and Bell (2011), reliability means that the study “must be replicable”. It is emphasised that replicating means doing the same case study over again, not duplicating the findings of one case by conducting another case study (Yin, 2009). Since reliability is achieved, the biases and errors of the study can be minimised (Yin, 2009). Bryman and Bell (2011) and Yin (2009) believed that a researcher needs to document the research procedures in great details so other investigators can replicate earlier research.

Considering all aspects above, this study has thoroughly documented the procedures followed in this research. The reliability of this study can be demonstrated through, first of all, the research design. The design of this study was guided by the research question. The research question helps the researcher to focus on collecting particular data that are important. The research design of this study involved the selection of the unit of analysis and data collection techniques. Second, there are the research settings. The research settings for this study
comprise the procedures to enter the research area and the selection of participants. The procedures and selection of the participants have been described in great detail. It is expected that other investigators would easily be able to repeat the processes. Third, regarding the data analysis method. This study adopted the six phases of thematic analysis proposed by Braun and Clarke (2006) and Clarke et al. (2015).

4.9 Ethical Considerations

For the purpose of this research, the RMIT University Human Research Ethic Committee (HREC) approved and classified this study as more than low risk since it involved human participants and the nature of the research, that is, on a military organisation (see Appendix 1: the RMIT University HREC’s Notice of Approval). Complying with the RMIT University HREC, research participants were sent a letter of invitation, information about the research objectives, and a participant information and consent form (PICF). Generally, the PICF provides the participants with information that explains the purpose of the study, why the participants have been invited to become involved in the research, and what the participants are required to do during the study. Potential participants also received a verbal explanation from the researcher before making a decision whether or not to participate. During the study, the participants would be interviewed, observed, and were expected to answer any question that might arise while they were being observed. All participants were informed of their right to withdraw from the research at any time without having to offer an explanation, and their data would be destroyed if it had not already been processed. Prior to participating in this study, participants were required to sign the PICF to officially acknowledge that they had been briefed by the researcher, had received and fully understood the information regarding the project, and were willing to participate voluntarily in the study.
In accordance with the PICF and the research ethics, the privacy and confidentiality of all individuals and organisations would be strictly maintained. Considering the small number of operational military units that operate certain types of aircraft, where there is the probability of units and participants being recognised, detailed information regarding units that participated in this study will not be disclosed. Therefore, the data collected that was processed using a code system or pseudonyms. The purpose of applying a code or pseudonyms is not only to protect the identity of units and participants, but also to encourage participants to be more responsive, critical, and open when answering questions. It was believed that participants felt confident and secure during the course of the research.

4.10 Summary

This study adopted a qualitative case study approach to acquire an in-depth understanding of the influence of the Indonesian national and military culture on aviation safety. The nature of the research question informed the use of the qualitative case study approach as means of exploring the influence of cultural factors on aviation safety through interview, observation, and analysis of written documents. The participants were selected carefully and randomly to ensure that the selected participants were appropriate representatives of the units and could provide in-depth information concerning their respective unit’s safety system.

The various sources of data, which include interviews, observations (field notes), and written documents, were analysed. Thematic analysis was employed in this study and six phases of analysis were conducted involving: data preparation/familiarisation, generating code, searching for themes, reviewing themes, defining and naming themes, and producing a report. To increase its intellectual rigour and validity, this study employed three procedures: triangulation, member checking, and disconfirming evidence.
CHAPTER 5

FINDINGS AND DISCUSSION: INDONESIAN NATIONAL CULTURE AND SAFETY

5.1 Introduction

Based on the thematic analysis that has been discussed in chapter 4, the findings of the analysis are presented in this chapter. Two overarching themes emerged from the analysis: the characteristics of the Indonesian national culture and safety, and the characteristic of the Indonesian military organisational culture and safety. In this chapter, only the first theme will be discussed, and the second theme will be discussed in chapter 6. This chapter begins with the presentation of the findings, which then is followed by a discussion of the current Indonesian national culture and its influences on Indonesian military organisations. Subsequently, some characteristics of Indonesian national cultures, which are mostly derived from Javanese culture, that exist in the military units, and their impacts on the SMS implementation and the promotion of safety culture, are presented and discussed.

5.2 Multiple Case Studies

The multiple case studies comprise four air operational units that operate various types of aircraft. All four units have been in the service for more than fifty years as they were established several years after Indonesian independence. Aircraft in two operational air units were operated by one pilot or two pilots while the other two units require multiple crewmembers to operate the aircraft.
5.3 Participants

Taking into account the criteria described in chapter 3, the researcher approached and observed forty personnel from four air operational units, and had discussions about their units’ daily activities and safety systems. After the initial contact with these personnel, the researcher invited them to participate voluntarily in this study. Of the many who expressed an interest in participating, twenty-seven were carefully selected and subsequently agreed to be interviewed and observed during the data collection period.

From unit one, five officers and one NCO were selected. The officers were three pilots with more than ten years in the service; one pilot had been in the service for more than six years and one technician officer had over ten years of experience. Regarding their position in the unit, one officer was the top manager of his unit while, two officers were middle managers and two others were staff officers of the unit. One officer was acting unit safety officer since the previously appointed unit safety officer had moved to another unit. The NCO was a qualified technician who had been in the service for more than twenty years.

Participants from unit two comprised six officers and two NCOs. The officers included one pilot who had been in the service for more than seventeen years and five maintenance officers, with service experience ranging from seven years to more than ten years. The pilot was a top manager of the unit, and the five maintenance officers had different posts in the unit: one maintenance officer was the head of the unit’s maintenance section, another was the unit’s safety officer, and the three other officers were middle managers and staff officers. Of the two NCOs, one had been in the service for over fifteen years and the other for over twenty years.

Participants from unit three comprised three officers and three NCOs. One officer was a pilot and the unit’s middle manager and had been in the service for more than fifteen years. The two other officers were qualified flight engineers and technicians and had been in the service for more than fifteen and ten years respectively. Both officers were posted at the unit’s
maintenance section as staff officers. The three NCOs had been working in unit three for more than ten years and were qualified flight engineers and technicians.

Unit four’s participants consisted of three officers and four NCOs. All three officers were pilots and had been working in the unit four for less than ten years. The three pilots were posted at the unit’s air operations sections as pilot officers. Three NCOs were qualified flight engineers and technicians and posted at the unit’s maintenance section as staff. One NCO was a qualified radio operator in the air operations room.

Table 6. Participants

<table>
<thead>
<tr>
<th>Unit</th>
<th>Rank</th>
<th>Qualification</th>
<th>Position</th>
<th>Length of Service</th>
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<tbody>
<tr>
<td></td>
<td>Officer</td>
<td>Non-Officer</td>
<td>Pilot</td>
<td>Flt Eng / Tech</td>
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<tr>
<td>1</td>
<td>5</td>
<td>1</td>
<td>4</td>
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</tbody>
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5.4 Current Indonesian National and Military Culture

All participants believe that Indonesia possesses a national culture. Various factors have influenced, shaped and contributed to the formation of the current Indonesian national culture. Those factors include religions such as Hinduism, Buddhism, Islam, and Christianity, other countries’ cultures, and hundreds of various Indonesian native ethnics and tribes with their own languages and cultures. This was acknowledged by participants as indicated in their statements quoted below.

There is an Indonesian national culture. We have studied Indonesian national culture in school, and even though Indonesia consists of many cultures, I believe the culture is
still in accordance with our motto *Bhinneka Tunggal Ika* (unity in diversity). Our government has been promoting our national culture for a long time as the Indonesian national identity. (2G)

Yes, Indonesia has its own national culture. I am thinking that national culture is what other people think about our country, Indonesia, what its culture is. Indonesian culture comes from diverse people who are famous for their politeness and friendliness. Then, from this diversity come various cultures and customs/traditions. (4A)

I think Indonesian culture is a diverse culture as Indonesia consists of many tribes, hundreds of tribes, from Sabang to Merauke. These various tribes and cultures have formed Indonesian today with our unique characteristics. (1A)

I think the foundation of the Indonesian national culture was the monarchy system as we can see now that feudalism still exists and is still being practised. It means that our social structure is more a top-down approach rather than a side-by-side approach that might differ from other countries. As a result, what appears now is that young people have a kind of rigid loyalty or blind loyalty to older people or the older people have a kind of full social authority over the young people. Hence, even though over time there were some influences on our culture, it could be considered as insignificant. For example, when Japanese came to Indonesia, and our people became more disciplined. However, it was the discipline that emphasised more a top-down approach rather than equity. So, this is probably the most influential factor which causes the existence of feudalism to still be strong. (6A)
Indonesian national culture has been influenced by many factors, and one example or one of the factors is religion. We can see it in our society; our people are still practising many rituals that are based on their respective faiths. (3I)

While a few participants believe that Indonesian national culture has been shaped and formed by various cultures, most of them contended that Javanese culture has had the most profound influence on Indonesian national culture. This demonstrated on the participants’ statements quoted below.

In general, I think our culture is dominated much by its sub-cultures, such as Javanese culture. Javanese culture has its own characteristics which are probably different from Sundanese culture, Batakinese culture, and culture from Papua. Although, there are various cultures that exist within Indonesia that have influenced our culture, I think Javanese culture is the basis of our national culture. (3A)

I am thinking, as I am Javanese, our national culture is more likely similar to Javanese culture. I believe that it is reasonable to say that Javanese culture as our national culture. There are some characteristics of Javanese culture that are also present in our national culture. We can see those characteristics of Javanese culture that exist in the Javanese villages or kampongs have become practice nationally. I believe those cultures are good to be preserved. (2H)

I think Javanese culture has penetrated into our national culture. We can see it not only in government institutions but also in our military organisations. Nowadays, we can see
that even Batak has followed Javanese. So, I believe that Batak has been much influenced by Javanese culture as the majority of us are Javanese. (3R)

I think there are not many differences between Javanese and military cultures. I have been taught Javanese culture since I was little, and when I joined the Indonesian Air Force, regarding culture, I did not find many differences. (4Z)

Although there have been various ideas about the constructions and composition of Indonesian national culture, all participants believed that there are some characteristics of the Indonesian national culture, which mostly derived from Javanese culture, that are accepted and practised by Indonesians. All participants believed that Indonesians, as a society, are bound by written and unwritten rules and code of conducts, some of which are governed by cultural factors. This was acknowledged by one participant as indicated in the statement quoted below.

Indonesia, as one of the Eastern countries, possesses the strict principle of unggah ungguh (polite or manner), patuh (obey) to parents, so what we have seen here is that we have to hormat (respect) older people. As far as I am concerned, we have to be like that, and although there have been some influences on our national culture, this culture is still strictly maintained and practised, especially in the remote areas. (1A)

One participant, 4J, asserted that he, as a Javanese, had to speak totokromo or bosokromo to his parents as a way of showing his respect. Respect is given not only based on age but also status, rank, experience and position. Another way of demonstrating respect is by using Bapak or Ibu (sir or madam) when addressing a person who is regarded as having a superior position since the hierarchical relationship is preserved and emphasised. In addition,
the authoritarian structure is also maintained in Indonesian society. For example, 1A stated that he must first abide by his parents’ wishes and if he has an objection, he can communicate it in a very polite way some time later.

Indonesian highly values group cohesiveness and harmony over the individual. *Gotong royong* (communal cooperation) and *kekeluargaan* (family principles) are some of the manifestations of group cohesiveness and harmony which are still being maintained and practised. One participant, 1B explained how he maintains and practises the value of *kekeluargaan*. He elucidated that “*mudik*” is an Indonesian tradition, whereby migrant workers return to their hometown to gather with their family. The tradition usually occurs once a year, especially during the Muslim religious holiday, *Eid al-Fitr*. He claimed that even though he is a Christian, he still returns to his hometown not only to gather with his family but also to show his tolerance and demonstrate the value of *kekeluargaan*.

All participants believed that the Indonesian military culture has adopted and been much influenced by the Indonesian national culture. Many of the characteristics of the Indonesian national culture are being practised and emphasised in its military organisation. This was recognized by participants as indicated in the statement quoted below.

I believe that military culture that what has been experienced by military personnel here aligns with the Indonesian national culture in which subordinates will be very loyal to their supervisors. Whoever shows sign of disloyal will be removed. (A1)

Personally, I believe that our military culture has been much influenced by our national culture such as *unggah ungguh*. So, sometimes I feel this *unggah ungguh* culture overrides our military organisational culture. (B1)
Our military culture has been much influenced by our national culture. (C1)

For sure, national culture influences our military culture. For example, sometimes we receive an order that has nothing to do with our daily job at the office and because we have to be polite, friendly, and maintain harmony, we must do that. (D1)

5.4.1 Discussion

The findings suggest that some cultural elements that originated from various cultures have contributed to the formation of Indonesia’s national culture. All participants unanimously believed that Indonesia possesses a national culture even though the country is comprised of many tribes, ethnic groups, religions, and languages. This is consistent with Minkov and Hofstede’s (2012) study, which found that eight out of ten sample regions in Indonesia form a homogeneous national cluster. Moreover, the findings of the Minkov and Hofstede study demonstrate that the majority of Indonesians share basic cultural values which form a homogenous culture. Indonesian national culture consists of numerous norms, values, beliefs, and written and unwritten principles. These cultural elements have provided guidance for Indonesians to behave in particular ways. Furthermore, the unique characteristics of the Indonesian national culture are not only practised by Indonesians, but also distinguish the Indonesian culture from other, and provide Indonesians with some sort of identity that best describes being Indonesian. This finding is aligned with that of Koentjaraningrat, as cited in Yampolsky (1995).

According to the findings, Javanese culture is the foundation of Indonesian national culture. Many of the values, norms, and beliefs of the Indonesian national culture are derived from Javanese culture which has been practised in most, if not all, government institutions. This finding is aligned with those of Hess (2001) and Irawanto et al., (2011), who found that
the cultural values of Javanese culture are the root of the work attitudes within Indonesian institutions, including the military. Although government employees come from many different backgrounds and subcultures, it seems that the values of the Javanese culture are well-suited to government institutions where they have been accepted and practised. Employees who come from other backgrounds have accepted and adapted well to the Javanese culture that is practised in their workplaces. As Javanese cultures is dominant, it is evident that other subcultures have made little contribution to the formation of the Indonesian national.

As mentioned above, military culture has also been significantly influenced and shaped by the Indonesian national culture, that is, Javanese culture. Many Javanese values can be identified and observed within Indonesia’s military organisations. One of the reasons that Javanese culture has significantly influenced and been deeply rooted within the military organisation is the placement of the priyayis in many military strategic positions (Irawanto et al., 2011). According to Anderson (1985), the Javanese ethnic group occupied almost 80 percent of the strategic military positions (general-ranking officers). Although the number of Javanese occupied strategic military positions has decreased over time, it still accounted for almost 60 percent of the total Indonesian military elites (Anonymous, 2005, 2008). In the period of 2003 - 2005, Javanese officers accounted for about 56.9 percent of the total military elites (72 general ranking officers). The ethnicities of the military elite for this period were: 46 Javanese, 9 Sundanese, 4 Batak, 2 Buginese, 2 Menadonese, 1 Jambinese, 1 Minangkabau, 1 Acehnese, 1 Ambonese, and 10 unknown (Anonymous, 2005). From 2005 to 2008, Javanese officers occupied 59 of the 73 general-ranking positions; the distributions of the elite military ethnicity were: 46 Javanese, 9 Batak, 7 Sundanese, 2 Acehnese, 2 Ambonese, 1 Buginese, 1 Madurese, 1 Jambinese, 1 Minangkabau, 1 Balinese, 1 Minahasan, and 1 unknown (Anonymous, 2008). The purpose of placing priyayis in many Indonesian military positions is to encourage and disseminate the expression of Javanese culture within the Indonesian military
organisations (Irawanto et al., 2011). The efforts to promote Javanese culture as a national culture, especially in military organisations, has brought positive results since many of the characteristics of the Indonesian military organisational cultures do reflect the Javanese culture. Javanese values such as unggah ungguh, kekeluargaan, hormat, hierarchy, and harmony (rukun) are some of the values that are practised and can be observed within Indonesian military organisations.

In terms of cultural values, the majority of the Indonesian military personnel do not experience any difficulties when they transition from civilian to military life since many of the characteristics of the Indonesian military organisational culture are similar to those of the national culture. They find that many of the values and norms that apply to their current military units are not so different from the values and norms that prevail in civilian society. This finding is in line with those of Trice and Beyer (1993) and Schneider et al. (2013) that national culture has influential impacts on organisational culture. Moreover, other cultures such as transnational and industry cultures have also shaped and contributed to the establishment of the Indonesian military organisational cultures. Norms and values that have been adapted from other cultures are unconsciously practised and have become guidelines for the behaviour of the unit personnel. The prevailing culture is considered to be an appropriate way of life as the culture has experienced only little change over time. Nevertheless, this finding is not consistent with Kier (1996) who contended that military organisational culture is different from its national character although it still has some features that reflect civilian society.

5.5 Overarching Theme 1: Characteristics of Indonesian National Culture and Safety

The following sections discuss the characteristics of the Indonesian national culture that can be identified within the Indonesian military units, and their impacts on safety. Each characteristic
of the national culture, which consist of hierarchy, authoritarian structure, *rukun* / harmony, *unggah ungguh* / manner, and uncertainty avoidance, will be described. Furthermore, to some extent, the impact of each characteristic on the organisation’s safety strategies (the implementation of the SMSs and the promotion of safety culture) will also be analysed.

### 5.5.1 Hierarchy

Similar to many other military organisations, the Indonesian military organisation is hierarchical. However, in the Indonesian military, the hierarchy is determined not solely by rank and position, but also by seniority. Seniority is determined from the time when military personnel graduate from their military academy or when they are commissioned. Although there may be only a few months difference between the graduation or the commissioned dates of personnel, it still defines seniority. One participant, F1, stated “Military culture has a clear definition of hierarchy and senior, junior”. Junior officers or NCOs do not address their superiors directly by name, but add “Bapak” or “Ibu” (sir or madam), or “mas”, “abang” (big brother) or “mbak” (big sister), in front of his/her superior’s name; however, senior officers usually call their juniors by name. The seniority in the military units is strictly preserved and practised as 5A and 6A claimed.

Generally, everything that applies to the military is based on the hierarchical system. Since we have been colonised by Dutch and Japanese in which hierarchy, and the gap between superiors and subordinates were strong, this system is still unconsciously practised by us until now although there have been many influences from foreign military organisations. We can see that the concept of how foreign military members interact among themselves is different from us. We still maintain a strong hierarchical system. (5A)
In the military itself, the presence of feudalism is even stronger as it is shown by loyalty in military, rank systems and hierarchical system. (6A)

It is not uncommon for a unit commanding officer (CO) to be the most senior officer in the unit. The CO is assisted by staff officers who are in charge of mainly operational and maintenance sections. Each operational and maintenance section is led by a chief of operations and a chief of maintenance respectively, who are directly answerable to the CO. Under the chief of operations and maintenance, there are staff officers in charge of sub-sections. Each head of a sub-section is responsible for managing and organising all unit personnel who work directly under their command. For the multi crews’ units, the members of the operations section consist mostly of aircrew (pilot, flight engineer, loadmaster, and radio operator) and the maintenance section comprises maintenance/technician and ground crew/support personnel. For the units that operate single- or double-pilot aircraft, the operations section is manned by pilots assisted by a few NCOs, and the maintenance section is staffed by maintenance/technician and ground support personnel.

The hierarchical unit structure employs a top-down approach whereby every order has to come from the CO and is then disseminated through the chain of command. Likewise, information that comes from personnel in the field, including safety, has to be directed through the existing chain of command. 4X claims “I have to go to my direct supervisor if I have a problem most of the time. I was not allowed to report directly to the Commandant as there is a system in place, and I need to obey the rules”. 6A, a commanding officer, affirms that hierarchical systems have created situations which prevent him from directly receiving information from his subordinates. He elucidates that it is difficult to encourage subordinates to report any issue voluntarily as the hierarchical system, to some extent, has created a complex bureaucracy that prevents subordinates from directly conveying messages to their superiors.
Furthermore, 6A claims that “The prevailing condition forces me to go to the field more often in order to see the real working conditions of my men. Otherwise, I will not get any factual information in real time. The hierarchical system forces my subordinates to report every problem through a chain of command”. 6A has also established forums or meeting times, such as end of day and end of week briefs. The forums are intended to provide subordinates a place where they can convey and discuss problems directly. In these forums, he acts as a moderator, not a commanding officer. Thus subordinates can freely express their concerns. However, practically, only officers are allowed to attend the forums. Subsequently, the officers will disseminate the results of the briefings at the unit’s morning roll call on the following day.

Several participants expressed their concerns about the hierarchical structure. One participant, 3R, doubted that the messages delivered by the members in the field would fully reach the higher authority. 3R claims that “Actually if a message is considered unsympathetic, the message will be censored and not reach the right authority”. Since the messages have to be channelled through the chain of command, several levels of senior officers will selectively choose and filter messages. As a result, the top authority will receive only those messages that have been thoroughly filtered. Another participant, 5A, believes that the different perceptions and interpretations of senior personnel will prevent the entire message from reaching the upper echelons.

In my opinion, hierarchical systems become a major obstacle. Since safety can determine life or death of people, a hierarchical system is not appropriate. On the one hand, the hierarchical structure is good when all responsible authorities have a good understanding of safety. On the other hand, the hierarchical system becomes a major obstacle when all responsible parties have various levels of safety knowledge and possess different perceptions. Messages that we try to deliver will be interpreted
differently or cannot be accepted. Consequently, personnel working in the field would have to fend for themselves to survive. (5A)

Likewise, 5A doubted that subordinates would receive unaltered information about the results of the briefings that were delivered by the officers.

Only officers are invited to attend the briefings. After that, the officers will disseminate the results of the briefings. I am not sure whether the officers will disseminate the entire 100% result of the briefings.

Another challenge posed by the hierarchical system is the slow generation of some of the aircrew qualifications. 3Q stated that several processes are required to train unit members to be qualified as aircrew. The processes require intense administrative work that also involves a higher level of command. The training needed to produce highly qualified aircrews, including ground and flight training, can take up to several years. The bureaucracy in a hierarchical system slows the process of producing qualified aircrews. 3Q claimed that, at the time of the interview, his unit had a shortage of qualified loadmasters as there was no ongoing loadmaster training and the training process takes time.

5.5.1.1 Discussion

The findings suggest that a hierarchical structure is strictly maintained and practised in the Indonesian military organisations. The hierarchy in a military organisation is determined by several considerations, such as rank, position and seniority. Moreover, age is another factor that plays a critical role in shaping the relationship and interaction among the members of the unit. As previously mentioned in section 4.4, the ways in which unit personnel interact with others is also influenced by age. In Indonesian culture, younger people are expected to give
respect to their elders, and this clearly applies to the Indonesian military organisational culture as well. Moreover, many participants believed that the hierarchical structure in Indonesian military organisations was also inherited from the Dutch and Japanese who colonised Indonesia for hundreds of years. Although, currently, Indonesian military personnel are exposed to other cultures, through interaction with military personnel from other countries, this has few influences on the Indonesian military organisational culture. A strict hierarchical structure is still preserved and practised which distinguishes the Indonesian military organisational culture from other military organisational cultures, particularly those in western/developed countries.

According to the findings, the commanding officer (CO), a chief of operation, a chief of maintenance, and other middle management positions have to be occupied by senior officers. The CO must be a pilot and the most senior officer in the units. While the unit chief of operations must be a pilot and the second most senior officer after the CO, the unit chief of maintenance must be the most senior maintenance officer. For other managerial positions within the unit, the same formula is applied, in which the senior officers occupy higher management positions and the junior officers occupy lower positions such as a flight line supervisor or head of a sub-section. This system is well known, in local terms, as urut kacang, which can be translated into English as being in a series, being ranked in a series, according to seniority (Stevens & Tellings, 2004, p. 1078). Pilots fill all management positions under the unit chief of operation, whereas all management positions under the unit chief of maintenance are held by maintenance officers, except for the logistics section that is led by a logistics officer. It is not possible for a junior officer to occupy a management position higher than that of a senior officer. Regardless of their backgrounds (education, experience, etc.), junior officers are to wait until the time come for them to be appointed to a certain position. There is a merit system in place. However, it is more on the time-based system since seniority is determined mostly by seniority. Moreover, as long as the officers do not make any fatal mistake, and
comply with all rules and regulations, both written and unwritten, they shall not have many issues with their military careers.

According to Schneider et al. (2013), the basic assumption of a hierarchical structure in an organisation is to create stability. It is believed that hierarchical structure allows people within an organisation to behave appropriately as they are clear about their roles and procedures (Weber, 1978) that have been officially stipulated in rules and regulations. In a hierarchical organisational structure, it is expected that people value communication, routinization, and formalisation (Schneider et al., 2013). The behaviour of the people within an organisation can be predicted and confirmed. In the case of the Indonesian military organisation, the hierarchical structure is not only guided by seniority, but is also well documented in the *Pokok-Pokok Organisasi dan Prosedur* (procedures and organisational principles, 2014). Figure 12 below depicts the organisational structure of the Indonesian Air Force unit that was derived from *Pokok-Pokok Organisasi dan Prosedur* (2014).

![Organisational Structure](image)

Figure 12. Organisational Structure

Figure 12 is the updated organisational structure in which the unit safety officer is no longer under the chief of operations but on the same level. The purpose of the amendment was to enable the unit safety officer to communicate directly with the CO. Previously, there was a
growing concern that the chief of operations, for various reasons, had the authority to omit or modify safety information that would be presented to the CO.

As shown in Figure 12, only a few personnel worked under the chief of instructors and unit safety officer. Unit personnel in managerial positions under the unit chief of operations were mostly pilots and officers (all pilots in the Indonesian air force were officers). In the operations section, the staff comprised a few NCOs and enlisted men. Likewise, a few maintenance officers occupied managerial positions under the unit chief of maintenance assisted by several NCOs and enlisted men. In carrying out their daily work, each unit member had clear roles, responsibilities and procedures that were formally stipulated in the unit rules and regulations. Normally, the operations staff dealt with every issue regarding flying operations while the maintenance staff took care of issues related to aircraft maintenance. Preparing and flying the aircraft for an assigned mission were complex tasks, requiring considerable effort and time. However, since these had become routines tasks for the unit’s personnel, the job’s execution seemed to be flawless. The hierarchical structure allowed the members of the unit to effectively and efficiently communicate. If they faced any issue, they knew where to go and explained the issue so that it could be solved. Thus, communication became critical to accomplishing the job. The job description guided the unit personnel in the execution of their assigned tasks. As each member understood his own roles and responsibilities, there would be no confusion and stability within the unit could be established.

Another factor that supports the hierarchical organisational structure in a military organisation is that it provides a platform for military leaders to coordinate their subordinates in a dynamic environment to achieve their end states or objectives. Most of the military command and control (C2) apply distributed supervisory control systems which are hierarchical and cooperative (Shattuck & Woods, 2000). Shattuck & Woods (2000) argued that distributed supervisory control systems allow military leaders to control the dynamic process
of the systems through intelligent local actors who can be separated by time and space. Military leaders utilise predetermined procedures and plans in order to coordinate the entire processes. The local intelligent actors must implement the predetermined plans and procedures to meet the commanders’ intents. However, the predetermined plans and procedures are often inadequate in dealing with the unanticipated variability of emerging local conditions (Shattuck & Woods, 2000; Woods and Roth, 1988).

The findings suggest that the military hierarchical organisational structure has created a complex system of bureaucracy. Some characteristics of each unit’s bureaucracy are congruent with Weber’s characteristics of bureaucratic organisation. First, the members of the units are divided based on their specialisations with their own clear responsibilities and authority. Second, the units utilise a hierarchy as a method of organising offices or positions. Third, all unit members receive formal education and training in order to obtain their technical qualifications. Fourth, the unit personnel are professional soldiers who receive fixed salaries and pursue their careers within their respective fields. Fifth, all the unit members perform their tasks in accordance with the existing rules, regulations, procedures and other controls. However, in regard to the sixth characteristic of Weber’s bureaucratic organisation that was discussed in chapter 3, the situation in the military organisation is slightly different. The relationship between superiors and subordinates is significantly influenced by personal considerations. Therefore, it is not uncommon for a superior to be subjective in his/her treatment of subordinates.

The hierarchical structure has set a formal procedure for the members of the unit how to do some organisational processes. In the case of safety reporting system, the members of the unit were required to report safety-related issues through the available chain of command. Initially, a member of the unit must report a safety problem to his direct supervisor and fill out
a safety form or hazard report. Then, the safety report is sent to the CO through various levels in the chain of command (superiors).

Considering the organisational process in the hierarchical structure, the structure has some potential disadvantages as demonstrated by the findings. First, since the majority of the unit members work under the chief of maintenance and the chief of operations, it is improbable that the unit safety officer will be the first person to receive a safety report. The existing safety reporting system made it difficult for the members of the unit to report a safety issue directly to the unit safety officer. Safety problems had to be reported by means of a safety report form or hazard form that had to be filled. The unit members who reported safety problem were expected to provide as clear and as much information as possible. Moreover, the reporter was required to write his identity on report as a confidential safety reporting system had not been established in the units. The existing safety reporting system had created a situation where the subordinates were reluctant to report safety issue as they were afraid of the adverse consequences embedded in the system, especially when an incident or accident involved the reporter’s superior or senior. Therefore, the unit safety officer was expected to be more proactive in seeking information related to safety issues.

Second, the conventional hierarchical structure prevents the unit personnel, especially flight line supervisors, from making a quick decision. The structure requires the members to inform the CO about the emerging local situation and wait for the CO’s directive. The sequential decision-making process works well in normal situations; however, if the emerging local situation requires personnel to take immediate actions, or make decision in the case of high operation tempo, the hierarchy is not the most appropriate system. Hence, the hierarchical structure can be a factor that prevents the creation of a flexible culture. A flexible culture allows the authorised personnel in the field, with a proper delegation of authority from the CO, to
immediately make an appropriate decision based on the analysis of the unanticipated emerging local conditions. Subsequently, appropriate actions can be initiated by personnel in the field.

Third, there is a possibility that a safety report or safety information will be removed or modified before it reaches the CO or the authorised officer for various reasons and interests. The hierarchical structure compels the safety report to be directed through various levels of seniority. Due to various backgrounds, knowledge, perceptions regarding safety, officers or supervisors have their own reasons and interests for modifying or eliminating the safety report so the message cannot be conveyed properly to the CO or the authorised officers. Similarly, the directives from the CO can also be filtered down through levels of supervisors; hence, subordinates will not receive the entire message. Because many COs realised the shortcomings of the hierarchical structure, they established several initiatives aimed at gathering as much factual information as possible. Some of the initiatives were observing, inspecting, and having a direct conversation with their subordinates who work in the field (flight lines and hangars) and holding formal and informal meetings that allowed their subordinates to freely express their concerns regarding work-related issues including safety. The purpose of the initiatives was to provide a framework that could facilitate better safety communication between superiors and subordinates.

Inadequate or inappropriate safety communication will have influential impacts on the creation of an informed culture, a just culture, a learning culture, and a reporting culture – the lack of which can jeopardise safety. According to Orasanu et al. (1997), effective and efficient communication is a must in completing tasks that require coordination and interaction among multiple players, especially in high-risk organisations. It is through communication that critical information, thoughts, suggestions, and intentions can be shared and made known to others. Subsequently, based on that information, the CO or the authorised officers are able to make accurate decisions. Flight safety and successful flight operations require not only a competent
aircrew to fly the aircraft, but also good communication skills among all the stakeholders involved in the aviation industry.

Fourth, the formalisation in the hierarchical organisational structure requires intense administrative work. Within the Indonesian military organisation, the hierarchical structure exists from the unit level to the headquarters level. In one of the sample units, unit 4, the hierarchy had created a serious issue - the unit had a shortage of qualified loadmasters. Two reasons for the slow replenishment of loadmaster were the unsustainable loadmaster training and the intense administrative process required. The loadmaster training program was not conducted on a regular basis, but ran when needed. Regarding the intense administrative process, it began with the CO of the unit submitting a written request for loadmaster training to the base commander. Next, the base commander forwards the unit proposal to various higher commands that are involved in the training. Before approval is granted, several assessments and considerations need to be taken into account. Some of these include the selection of the unit personnel who will undergo loadmaster training, the availability of loadmaster instructors, and the availability of aircraft for flight training, among others. Since the loadmaster training involves numerous stakeholders, the process requires considerable time and effort. The shortage of qualified loadmasters in unit 4 had imposed a greater workload on the available qualified loadmasters, thereby raising safety concerns. Many of the qualified loadmasters had to work beyond normal workday hours. As a result, they were compelled to breach the unit’s standard operating procedures (SOPs) that specified the normal crew duties and flying hours. According to the SOPs, eight hours was the maximum flying time, and twelve hours was the maximum working time for crews. The maximum working and flying hours specified for aircrews could not be complied with since the unit tended to prioritise the completion of tasks at the risk of compromising personnel safety. This demonstrates that the
lengthy and ongoing conflict between mission accomplishment and safety within an organisation is inevitable.

5.5.2 Authoritarian Structure

The hierarchical system in a military organisation creates a kind of authoritarian structure in which military personnel with lower ranks must obey without questions the orders that are given by their superiors. All participants believed that all tasks undertaken in their military units must be based on orders. One participant, 2L, stated that he and the other unit members obeyed and executed every order as long as it was not an unlawful order. Moreover, 2L believed that since the purpose of the military organisation is to go to war, it has to be obvious who gives orders and makes decisions. Military personnel who intentionally failed to obey or were evidently against the given orders must accept the risk that he would be “marginalised” (6A), “posted out to other units” (3R), or even “punished or has a significant impact on his military career” (1A). 3Q thought that military life can be equated with the traditional Indonesian wayang (puppet) show, “Puppets depend on dalang (puppeteer). So, whatever the dalang (puppeteer) asks the wayang (wayang) to do, it will do”. The wayang has no ability to question the dalang.

Since the expression of any disagreement with superiors involves great risks, many participants believed that the authoritarian structure leads to the creation of the asal Bapak senang (ABS) (as long as the boss is happy/satisfied) mentality. The ABS mentality creates a situation where subordinates always present a good report/information to their bosses so that the bosses will be satisfied. Two participants stated:

Since feudalism still exists and is being practised, I think it is difficult to promote a safety culture in our organisation. Feudalism creates an asal Bapak senang (ABS) mentality: the most important thing is always to look to be good; the most important
thing is everything seems fine, and nothing bad has happened. This condition does not support the creation of a safety culture since safety, basically, is how we discover small things that can become problems or potential hazards, which then lead to accidents or incidents. Subsequently, we can take preventive measures as early as possible. (6A)

In our culture, especially Javanese culture, we always feel bad if we have to take actions without instructions or permissions from older people. In fact, the culture also exists in our military organisation. We feel bad if we take the initiative, but our boss does not like it. If the boss does not like it, we are anxious about our future, our faith. We, as subordinates, always think like that. Therefore, as subordinates, it is better for us to obey what the boss says and wants. (3R)

As a result of the ABS mentality, subordinates will hide any information that can make the ruling authority unsatisfied. One of the actions is by selective safety information to higher command. One participant, working as the safety unit officer in unit 2, stated that his unit reported only two incidents to the higher command the previous year although the unit experienced more than five incidents. He explained that the unit considered other incidents to be insignificant, so it was not necessary to report them to higher command.

In addition, several participants argued that leaders in an authoritarian culture are unenthusiastic to receive and consider feedback from their subordinates. One NCO participant, 4W, who had been in the service for more than twenty years, claimed, “Based on my experience in the field, only certain people who want to hear and take feedback from subordinates. Only a few people who appreciate safety want to consider our feedbacks. However, most of them find it difficult to take feedback”. Another NCO participant, 4X, added, “Personally, I might speak up about matters that relate to our safety. However, I do not have the courage to speak up with
people who have an authoritarian personality”. Even if the commandant organised a forum in which they could express all their concerns freely without consideration of rank, 4X argued that he, as a subordinate, would still not have the courage to speak up. 4X explained that if he spoke up, there would be an adverse consequence because of his action. Another NCO, 4Y, asserted, “The situation after the forum is going to be a different story. If you are military personnel, you know it. Once you leave the room, it is going to be a different affair, which is what really happens”.

Since the authoritarian structure is based on a top-down approach, an interactive two-way communication is difficult to establish. Most participants believe that transparencies in their respective units are difficult to achieve. Hence, not only does the ruling authority receive only desirable information, but also subordinates will conceal information concerning hazards, mistakes or problems that can lead to an incident or accident. One commanding officer, 3I, believed that transparency could be established by creating a situation whereby all members feel safe about delivering their messages, and their superiors will listen and take the messages seriously. Participant 3I pointed out that if the situation was conducive to open communication, the subordinates would freely and voluntarily not only convey their messages but also confess mistakes that have occurred. On the other hand, another commanding officer, 6A, stated that since information regarding the actual unit operations was considered to be bias, he sometimes conducted a no-notice inspection of his unit personnel. The purpose of the no-notice, random and impromptu inspection was to examine the personnel’s readiness as well as their capability. Participant 6A stated:

A few times we have had problems with our crash teams in which their response is slow, or when they are fast enough, they did not have the proper equipment. Finally, we decided that our crash teams have to be in standby mode full time in which members of the crash teams are fully dedicated to being the crash team members so they will not
be involved in or given any other task. We demand them to be fully alert and in standby mode when our aircraft fly. They can take rest when the aircraft is on the ground. However, I still found that they were chaotic and not ready when we conducted several no-notice inspections and drills. Consequently, I made a decision that all the crash team members have to attend morning roll call, wear special vests, and have to be ready whenever they are called. I count and record their response time.

Lack of transparency provides little safety information for personnel within the organisation. One of the safety information resources includes the findings of the aircraft investigations and their subsequent dissemination. All participants believed that the findings are one of the useful safety information resources that provide them with invaluable information. They believed that they could learn an invaluable lesson from the findings that makes them more aware and alert if they have to deal with a similar situation in the future. Two participants stated:

I believe we are lacking transparency since I never know what the real causes of every occurrence. For instance, aircraft accident a, b, or c, I have an impression that we have an unconfirmed conclusion as we have never been informed the real causes of the occurrence. Consequently, we are never aware what actions need to be taken in order to avoid the similar occurrence that can happen in the future. (1A)

As technicians that directly work on the aircraft and in the field all the time, we hope that we are provided with the information about what the actual causes of the accident are, every time we have an aircraft accident. So far, I never know and only hear the rumour. I am afraid that someone will have different perception and interpretation regarding the accident. Knowing the factual causes of the accident, for example,
accident a, the cause is b, automatically makes us become more alert if we have to experience a similar situation in the future. (3R)

Regarding the lack of transparency within the military organisation, 3Q explained that two main factors create this condition: the inherent secrecy of the military and the influence of Javanese culture on the military organisational culture.

Two main reasons why there is no transparency in the military. First, it is a matter of intelligent. Every affair that happens in the military is considered classified. Another reason is the influence of Javanese culture in our military organisation. We have to consider our senior, people who are older, or people who are superior to us in our organisations. We have to respect them and are strictly bound to our culture. It is not good to tell something bad about them; we still have unggah unghu (manner). (3Q)

4J asserted:

It is one of my responsibilities to keep it as a secret. Every affair that happens here, either it relates to working processes or other issues related to flying operations, or it might be error and hazards that can lead to an accident, is only for our consumptions. I believe we have to keep that information for ourselves and we do not need to share it with other people. (4J)

5.5.2.1 Discussion

According to the findings, the order being given is the most crucial aspect of the military. Every task, job, and action taken by the unit members must be based on the given orders. Orders are issued by superiors, normally officers, who have the power and authority to manage and control all organisational processes. Military personnel are not allowed to refuse any given order as
stipulated in the military regulations and rules. Supriyatna (2014) argued that the functions of military regulations are to provide a framework for military personnel on how to behave and to enforce discipline. He believed that military personnel discipline not only arises because of personal awareness but it must be imposed by law enforcement. The relationship between superiors and subordinates within the Indonesian military organisations has been regulated and contained in the Decree of the TNI Commander: Kep / 22 / VIII / 2005 dated 10 August 2005 concerning discipline regulations of the TNI soldiers (Wulansari, 2009). Subordinates who refuse to obey orders given by their superiors are committing an act of insubordination. The risks associated with disagreement regarding orders, or a refusal to obey them, may vary depending upon the circumstances. Supriyatna (2014) classified sanction into two categories: disciplinary action and disciplinary punishment. Disciplinary action usually takes the form of light punishments mostly in the form of physical punishments such as having to do push ups, sit ups, additional drills, squat jumps, running, and many other physical exercises. On the other hand, disciplinary punishments are more severe since they will be recorded in the military personnel’s file and will incur administrative consequences. Forms of disciplinary punishments include reprimands for insubordination, light detention no later than fourteen days, longer detention (twenty-one days), and a dishonourable discharge. As military personnel are bound by the established rules and regulations, subordinates must be loyal to their superiors and must obey, unquestioningly, every order that they receive – or to use local terminology, the wayang must obey what dalang says.

The findings suggest that the military units have a structure that clearly defines the roles and responsibilities of its members. The structure has been designed to meet the military requirement as an organisation of war. Command responsibility is clearly defined, so that each unit member understands his own roles and responsibilities. The units consider the chain of command as the most efficient method for maintaining order and performing its duties. Officers
are the leaders who have control of a situation, command people and resources, and have the authority to make a decision. As an officer has decisive power over subordinates, authoritarian leadership is practised in the participated units. The characteristics of authoritarian leadership found in this study are in line with Srivastava (2005, p. 3) who stated that “authoritarian leadership involves task structure, specific assignment, little autonomy to subordinates in decision making and close control”. Structures are created by a leader and subordinates are required to meet the leader’s expectations otherwise they will receive adverse consequences (Amanchukwu et al., 2015). Rewards will be given when subordinates meet the leader’s expectations. However, they will be punished or reprimanded when not meeting those expectations. These conditions have led to another culture emerging in the units: reward and punishment (this will be discussed in more detail in chapter 6).

Findings suggests that as a result of the authoritarian structure, subordinates tend to provide only desirable information in order to make their superiors happy. A well-known local term for this mentality is *Asal Bapak Senang* (ABS). The mentality of *Asal Bapak Senang* (ABS) is one of Indonesia’s human traits and can be translated into English as “As Long As the Boss Happy”, “As Long As It Pleases the Master”, “Yes Sir Attitude”, or “Keep the Boss Happy” (Wika & Juneman, 2013). According to Valega (2012), Indonesians since childhood have unconsciously become accustomed to the mentality of *Asal Bapak Senang*. The mentality of *Asal Bapak Senang* is a method used by children to politely refuse the given order as well as being a way to please their parents. For instance, children are asked to study when their parents are not at home. However, the children watch TV and shortly before their parents arrive home, they quickly study. When asked, they will tell their parents that they did study. Whitfield (2016, p 1) believes that “…. cultural barriers like *Asal Bapak Senang* come into play. Because of the importance of status differences, subordinates may feel obliged to report good information about a situation that could actually be bad, from a Western point of view”. 

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Moreover, he states that *Asal Bapak Senang* dictates, in part, subordinates’ failure to inform their superiors about the factual problems or conditions regarding the performance of their own jobs. If the subordinates encounter problems, they will try to solve the problems by themselves without informing their superiors. They believe that if the superiors know something is not going as expected, this will create an unpleasant experience for the superiors. The subordinates assume that if the superiors are not satisfied with the situation, they (the subordinates) may suffer negative consequences such as losing their job. Therefore, the subordinates will do everything to make their superiors happy (Wika & Juneman, 2013).

According to Srivastava (2005), the basic assumption of the autocratic model (this can be associated with Likert exploitative authoritative) is that a manager considers authority as the only method that can ensure the completion of job and employees carry out their tasks according to the given orders. People in organisations value power; hence, management decides and directs what is the most appropriate action for the employees. Superiors strictly and closely supervise their employees in order to achieve desirable performance. Authority is delegated according to the roles and responsibilities of each employee. People within an organisation are highly dependent on the boss as he is the one who makes all the decisions. Various methods are employed to ensure that employees are highly motivated and perform better, which include: threats, punishments, fear, occasional rewards, top-down or downwards communication, and little interaction between employees and managers.

When applying the findings to Likert’s profile of organisational characteristics that have been discussed in chapter 3, it is clear that the unit’s management system is a combination of system 1 and system 2. Management has little confidence in subordinates. Most of the decisions are made by the management with very little input from the subordinates. It is rare for the subordinates’ ideas to be sought and used. Top and middle management are responsible for achieving organisational goals. Fear, threats, punishment, and occasional rewards are
methods used by the management to run the organisation. Information or communication that comes from the subordinates is censored for the boss. The decision-making process does little to motivate the subordinates because they are not invited to participate in the decision making, but are required to do as they are told.

Although the autocratic model seems to fit the needs of a military organisation, the findings suggest that there are some challenges when it comes to the implementation of the SMSs and the promotion of a safety culture. The combination of the authoritative system and the influence of Javanese culture in the Indonesian military organisations have created conditions that are less suitable for the implementation of a safety program. First, the autocratic leadership style has discouraged subordinates from taking safety initiatives. Amanchukwu et al. (2015) argued that within autocratic leadership, subordinates have little opportunity to express their ideas or make suggestions, even if those suggestions are in the best interests of the organisation. They believe that autocratic leadership is incredibly efficient, best used in a crisis situation, as decisions can be made quickly without disagreement, and can be implemented immediately. Most of the participants considered autocratic leadership to be an appropriate leadership style since, on the battlefield, commanders are required to make quick decisions and implement those decisions immediately. Most of the officers in the participating units exercise autocratic leadership as they have been trained for war. As a result, many participants argued that most, if not all, of the superiors in their units were unwilling to accept feedback or suggestions. The officers made the decision and issued orders to their subordinates; hence, this was only one-way communication, or a top-down approach. The superiors closely and strictly supervised their subordinates. This situation has prevented the creation of a flexible culture since subordinates cannot show initiative when something unexpected occurs; instead they are expected to wait for instructions or orders from their superiors. Since the work situation
is not flexible, the transition from a centralised to a decentralised situation is close to impossible.

Second, the autocratic model has created an environment in which subordinates are reluctant to report problems. The subordinates are not only anxious that their superiors will not be happy when receiving safety problems, but are also afraid of adverse consequences following the report, especially when the safety report involves their superiors. Consequently, the superiors believe that it is difficult to obtain information about safety issues or hazards from the subordinates. Management is likely to make the wrong decision if they do not have accurate data. A wrong decision can have a significant impact on the workplace and, moreover, can lead to a safety-related incident or accident. In addition, the autocratic model prevents the organisation from building a good safety reporting culture. According to Wiegmann et al. (2004), a good safety reporting culture can be established when the organisation creates a situation allowing its members to freely and without restraint report safety issues as well as ensuring that they will not experience negative outcomes or reprisals as a result of using the reporting system. The absence of a good safety reporting culture not only causes the organisation to lose its ability to identify the weakness and vulnerability of safety management before an incident or accident occurs (Wiegmann et al., 2004) but also fails to create a proactive culture, which is one of the conditions necessary to implement the SMS (Flouris & Kucukyilmaz, 2009).

Many officers realised that the prevailing conditions in their units have hampered the creation of a good safety culture. As discussed in section 4.5.1, there have been some initiatives from the CO and many other officers to establish forums that encourage the subordinates to directly convey their concerns to the top management of the unit. Moreover, in units 1 and 2, the COs and several other officers conducted no-notice inspections to investigate the actual working conditions of their subordinates. The no-notice inspections were conducted as the
officers believed that the information provided by their subordinates was biased. They realised that the pervasive Asal Bapak Senang mentality had influenced the working conditions within the organisation. However, the forums have not been effectively used as many participants, especially non-officers, not only were not allowed to attend the meetings, but also believed that adverse consequences would occur following the meetings if they were allowed. Although the CO emphasised that the meetings are free forums in which every attendee can express any concern, regardless of rank, the subordinates maintained that not all officers in the units shared the same perception and attitudes as those of the CO. Thus, they did not have the courage to speak up and had to think twice before revealing the real problems, or accept the risk associated with telling the truth.

Third, another effect of the authoritarian structure is a lack of transparency. Many participants believed that they had never been informed about the actual cause of aircraft accidents that had occurred within the organisation. Although the military conducts its own investigations, the results of an investigation are disseminated to certain parties only (usually only high-ranking officers) and are not for public consumption, or for lower-ranking officers and non-officers. Unlike civilian aviation, the military does not have an obligation to disclose the findings of its aircraft accident investigations. There are some reasons why the military is reluctant to disclose its investigation findings, one possibility being the element of secrecy in the military. The military considers that the results of its aircraft investigations are important data and that information is to be protected. Since military personnel have restricted access to the investigation findings, the creation of a learning culture, one of the foundations of a good safety culture, is hindered. Failure to establish a learning culture places the organisation at a high risk as there may a strong probability of a similar incident or accident occurring in the future. Furthermore, people in the field are not aware of preventive measures and cannot take appropriate action when a similar incident or accident occurs. According to Wiegmann et al.
(2004), a learning culture is essential if an organisation is to improve its safety. The organisation could learn from safety-related incidents, near misses, and accidents, and change or adapt its operations accordingly.

5.5.3 **Rukun / Harmony**

One characteristic of the Indonesian national culture that is revealed in its military organisation is *rukun* or harmony. This characteristic was revealed during one of the observation periods when one NCO (Non-Commissioned Officer) behaved inappropriately by smoking under the ‘no-smoking’ sign. Other enlisted men and NCOs in the unit who witnessed this did not intervene and just carried on with their activities. The NCO stopped smoking when an officer approached and asked him to put out his cigarette. One participant, 4X, said that he was reluctant to tell his co-worker to put out his cigarette because he did not want to ruin his relationship with him. Another participant, 4W, stated, "I know that his behaviour is inappropriate, and if I tell him to put out his cigarette, it will be good for us. However, if I do so, it will create conflict between us. So, it is better if I just ignore him and wait for someone else to tell him". One participant, 5Y believed that maintaining a good relationship with co-workers is far more important than giving a rebuke which will then create conflict. 5Y argued, "My concern is if I tell my co-worker that he has made a mistake, it will make him have a misperception about me. Another difficult thing being in the military is if someone who makes a mistake is your senior. If I told him about his mistake, he would ask me whether I always did everything right and I should not teach a senior. Thus, it is better for me to keep quiet and try not to make any mistake”.

Maintaining harmonious relationships in the workplace is necessary. As stated by one participant, 4Z, the members of the unit value *kekeluargaan* and as a family, they need to have *rukun* or safeguard the harmonious relationship.
In this unit, we have already considered this unit as one big family. For me, this unit is my second family. I think the value of *kekeluargaan* in the military and Javanese culture is the same. We should be willing to share and help each other. If I have a problem, I will discuss it with my family, and it is possible I will discuss it with my friend or my superior as well. By trying to have open communication, I believe it will avoid misunderstanding between us so that we can maintain *rukun* / harmony. (4Z)

Another participant, 3I, asserted:

*Kekeluargaan* means togetherness. When we deploy to another base, as a commandant, I usually arrange a dinner with my subordinates. It does not have to be an expensive dinner, for instance, we just have *nasi goreng* (fried rice) for our dinner. Every member has the same food for dinner. Moreover, when we finish our deployment and go back to our base, I will give my subordinates some sort of souvenir so that they can bring something to their family. The souvenir does not have to be expensive. *Alhamdulillah*, my subordinates are very happy, and with that, I can maintain *rukun* / harmony in my unit. (3I)

According to 4W, *rukun* / harmony can be established when people are tolerant of others. However, 4W contended that tolerance in his unit has some disadvantages since it can compromise safety.

I think it is very obvious between Yes and No in the Western culture. What I mean is there is no tolerance. However, in our culture, tolerance can have a different meaning. For instance, when a person knows someone and probably, they have some kinds of connection, maybe they are family, or they are best friends, their relationship can have
a significant influence on our system. It is very likely that the value of tolerance can lead to compromise rules or regulations as they try to maintain their relationship. (4W)

4X added:

I believe that the culture of toleransi / tolerance in our unit is very strong. Basically, this culture can open up the possibility of incident or accident as the leader cannot assertively take a decision. As a result, his decision can compromise safety. (4X)

5.5.3.1 Discussion

According to the findings, the unit members strive to maintain a harmonious relationship in their workplace. Rukun or being in harmony with others is another characteristic of Javanese culture that is practised by the unit members and was revealed during one of the observation periods. Rukun and tentrem (peaceful) are a philosophy of life that is strongly embraced by the Javanese (Murtisari, 2013; van der Kroef, 1959). According to Irawanto et al. (2011), rukun / harmony means that people are required to be respectful to avoid conflict. The basic assumption of rukun is that people are expected to resolve the conflict peacefully and with empathy, while still maintaining connections and compatibility (Lestari et al., 2013). They often hide their feelings and do not express the truth (seen by others as ‘hypocritical’) in order to achieve rukun and tentrem (Murtisari, 2013; Damayanti & Ardini, 2015; Herliana, 2015). Lestari et al. (2013) divided harmony into two categories, pseudo-harmony and essential harmony. With pseudo-harmony, a relationship is maintained by burying conflict or ethok-ethok (pretending there is no conflict (Murtisari, 2013)), while the relationship in essential harmony is maintained by ensuring togetherness and showing empathy to others.

In Javanese society, it is essential to maintain social harmony. It is impressed upon individuals that they must constantly strive for harmonious relationships in their social lives.
To achieve harmony, people are encouraged to minimise conflict by avoiding arguments, fights, and being ignorant. Moreover, harmony can also be achieved by maintaining tolerance and compatibility although opposing parties may have different interests. The preservation of harmony is one of the guidelines for Javanese in their social interactions, and it influences how Javanese handle disagreements. There are various methods or conflict resolution strategies that are commonly used to manage disagreement: silence, forgoing, discussion forum or appeal to the group, third-party intermediaries, and appeal to authority (Lestari et al., 2013; Whitfield, 2016). It is rare for two conflicting parties to openly discuss their differences. Whitfield (2016) maintained that the conflict resolution strategies are used to avoid direct confrontation and save face for the parties involved. In this way, the harmony within an organisation can be sustained.


While maintaining a harmonious relationship in the workplace is essential, the value of rukun or harmony has been misinterpreted by the unit members. Tolerating a unit member who is clearly violating rules by, for example, smoking under the ‘no smoking’ sign, is not considered as one of the manifestations of living in harmony. Other unit members who witnessed the incident did not intervene, demonstrating that the unit members were implementing one of the conflict resolution strategies discussed above. They avoided direct
confrontation and chose to keep silent and pretend that what their colleague was doing could be tolerated. The situation was complicated by the fact that this incident occurred in a military organisation characterised by ranks. It is impossible for a soldier to rebuke anyone with a higher rank. There is one local phrase “senior tidak pernah salah”, which can be loosely translated into English as “senior can do no wrong”. The phrase not only shows that the higher-ranking soldiers in the unit have more power and authority to justify their actions but also implies that they have privileges when it comes to the implementation of rules and regulations. Since the actions and behaviours of the senior members of the unit are considered as being beyond reproach, the lower-ranking soldiers are not allowed to correct them.

Furthermore, the incident suggests that the misinterpretation of rukun has become a factor that obstructs the establishment of safety culture. First, it has led to a situation where open communication or transparency is difficult to establish. As discussed above, the Javanese people are well known for being sensitive, polite, reluctant to tell the truth, and introverted. They accept differences in ideas and have a tendency to be silent. In the case of this study, many of the unit members chose not to speak up and still tried to maintain politeness although they were witnessing a unit member acting unsafely. They fully understood that their co-worker was engaging in inappropriate behaviour. Nevertheless, they preferred to hide their feelings as they felt uncomfortable about reprimanding their co-worker. For them, maintaining rukun was far more important than ruining their relationships. Second, maintaining rukun has caused some of the unit members, especially the lower-ranking soldiers, to become passive or apathetic. Koentjaraningrat (1988) stated that apathy is one of the characteristics of the Indonesian mentality that emerged after independence and is evident in people’s lack of interest, enthusiasm, or concern about participating in a project. The smoking incident can be considered as an indicator of apathy since some of the unit members were not fully engaged in the implementation of the SMS and the promotion of a safety culture. In an organisation that has
a strong safety culture, members of the organisation will actively engage in the safety program by taking care of one another and pointing out unsafe conditions and actions to each other. However, in this instance, no one tried to intervene or even remind their co-worker, but waited until an officer approached and ordered the member to put out his cigarette.

Third, the value of *rukun* has been used by the unit members as a justification for their breach of rules and regulations. Rules and regulations can be adjusted according to the emerging situation so that conflict can be avoided, and relationships can be maintained. Moreover, the value of *rukun* is one of the factors that need to be taken into account in a decision-making process. As was mentioned by some participants, *rukun* plays a crucial role and can have significant influence in the decision-making process; however, the decision may be such that it compromises the safety of the unit. For instance, one regulation stipulates after attending a six-month course, a pilot must clock up twenty flying hours in order to maintain his current flying license. However, since the CO was a personal friend, he decided that the pilot needed to have twelve flying hours only instead of twenty. This example shows that the personal relationship has significantly influenced the CO’s decision which breaches the existing regulations and compromise safety.

### 5.5.4 *Unggah Ungguh* / Manner

The influences of the national culture on its military organisation were evident during the interviews and the observation periods. During the observation periods, the influence of the *unggah-ungguh* culture was seen. Almost all young officers would use *Bapak* (sir) when addressing senior NCOs or older subordinates although, in terms of rank, those junior officers had a higher rank than their subordinates. Normally, officers will call their subordinates by their first names. Moreover, some officers, who were able to speak the Javanese language, would speak with these senior NCOs using *kromo*. As stated by Woodward (2011), *kromo* is
spoken by a person to show his/her respect and politeness or good manners to older people. Moreover, senior and junior NCOs were treated differently by officers. When issuing an order, officers would be more polite to senior NCOs than to junior NCOs. The junior officers showed more respect for the senior NCOs as these personnel were older, had more experience and were qualified in their respective fields.

The interviews revealed that the culture of unggah ungguh has an influential impact on how the unit members interact. E1 believed that the culture of unggah-ungguh or manners or politeness has shaped another attitude of the members within the units. E1 explained that this attitude made subordinates reluctant to report the actual situation regarding themselves or their working conditions since they were worried that their superiors would have negative perceptions. For instance, a person who was unfit to perform his duty would not talk to his superiors but would hide his actual condition. He was afraid that his superiors would think that he was just looking for an excuse and was not prepared to work, which in the end it would affect his work performance assessments.

The culture of unggah ungguh also directs the unit members on when and how to express ideas or convey a message. As A1 commented "If we wanted to report our concerns, we need to wait until the right moment. We cannot just go to our superior and tell about our problem. We also need to be cautious when discussing our problem because we have to talk in a polite way. If our superior is not in a good mood, it would backlash against us, and we could not deliver our messages correctly." Moreover, C2 contended that the politeness culture in his military organisation had established a condition in which the subordinates were reluctant to describe the actual situation in the unit. Most of the time, the subordinates would claim that they did not have any serious issues, including safety issue, when undertaking their tasks. This situation was caused by the assumption that if the subordinates state the actual circumstances of their unit, this would be regarded as an act of disloyalty to superiors and disobedience to any
given instruction. Furthermore, the subordinates would hide any situation that could make their superiors unsatisfied and presume that everything was working as intended.

Another aspect of Javanese culture that significantly influences the unit members’ behaviour is *sungkan* (a feeling of respectful politeness before a superior or an unfamiliar equal) (Geertz, 1989; Wierzbicka, 1992). One of the senior officers in unit 3, 3P, claimed that *sungkan* had caused junior officers to tend to be more passive and reluctant to take initiatives. 3P stated:

I have been asking my junior, many times, to check the progress of the safety report and he always says that the report is still on the commandant’s desk. So, I told him that you, as an officer and staff of the commandant, are to help and remind commandant so he will not be blamed by the higher command. As a staff, you must have the courage to remind the commandant if he forgets about the procedures and does not try to support the commandant to do anything that breaks the rules. As a staff, you have to be able to show the commandant the right rules and procedures if the commandant asks your opinions. So, this can be a safety barrier that can prevent incident or accident. However, he replied that he was *sungkan* to remind the commandant as the commandant is the most senior officer at this unit. (3P)

Three other participants asserted and added:

NCOs and enlisted men are *sungkan* to talk and discuss the problem with their superiors (officers). They feel more comfortable and will be more open to speaking about their concerns with their peers, NCOs and enlisted men, rather than with their superiors. (2M)
I think we need to learn how to say NO. We have been tasked to conduct a lot of missions by the operations section as they see that our unit has a high number of aircraft serviceability. This can be a factor that contributes to incidents and even accidents as, from the management perspective, our capability is lower than the demand to do the given tasks, and it is not balanced. So, we should be able to say NO and learn not to be sungkan. (3Q)

It is the nature of Javanese culture that we feel uncomfortable about taking the initiative. Thus, we have to wait until the superiors order us to do something. I found this culture in our military unit as well; we feel sungkan to our superiors, our commandant. (3R)

Many participants claimed that sungkan occurs not only on the ground but also in the air. During missions, sungkan has shaped the relationship among the crewmembers and other personnel as well. Several participants mentioned that:

Perhaps, in our military aviation, sometimes we feel sungkan to our seniors. For instance, we feel sungkan to say no when our senior asks our favour to bring his stuff. Loads of the aircraft are full already and cannot take any more goods. However, we cannot say no when our senior asks us to load his stuff into the aircraft. So, it is problematic for us as crews. I wish I did not have to face this same problem again in the future. I wish we did not have this sungkan culture. (4W)

In regard to sungkan, one obvious challenge, I think based on my experience, is that if I see my friend or junior or senior was doing unsafe actions, I feel sungkan to remind him. I know that the purpose of reminding him is to have a better and safer working environment, but I know that, sometimes, it is very difficult to change the culture.
Moreover, when we are doing a mission, and I see that there is something is not right, I feel *sungkan* to promptly remind the captain. I wait for the right time, usually when the situation is very relaxed such as when the crews are having dinner together, to discuss the matter. (4X).

Probably, some people think that Javanese are not honest as they feel *sungkan* to express their ideas. Subsequently, it can be said that a good conversation cannot be established when we always accentuate the culture of *sungkan*. (4Z)

### 5.5.4.1 Discussion

The findings suggest that the interactions among the members of the units have been critically shaped and influenced by one aspect of the Javanese culture, *unggah ungguh*. Nurcahyo (2015) defines *unggah ungguh* as a manner that guides people on how to interact and communicate with others in the form of language and behaviour. Quinn (2011) asserted that *unggah ungguh* is a Javanese term for an expression of respect used to show the social distinction. In Javanese culture, the social relationship between the speaker and listener, in terms of status and familiarity, can be easily deduced from the language they use (Geertz, 1976). As discussed in section 3.3.1, Javanese speech is generally divided into three broad categories: *ngoko*, *kromo*, and *kromo ingil*. Each of these categories is used according to the status of the interlocutor. Many scholars (Geertz, 1989; Subroto, 2008; Woodward, 2011; Quinn, 2011) have explained that while *ngoko* is used when the interlocutor has the same age, the same or lower status, *kromo* and *kromo ingil* are used depending on whether the interlocuter is quite respected or highly respected. The speech adopted in conversation is one means by which the Javanese show their respect and politeness to others. Moreover, Javanese are required to show appropriate appearance (clothing, body movements or gestures), proper articulations, and correct
intonation when interacting and communicating with others, especially with highly respected person. Sudikan (2017) argued that *unggah ungguh* has several functions which include: enabling a person to familiarise himself with a particular situation and act accordingly, and eliminating a person’s ego or the possibility of being cruel or rude. In addition, Sukarno (2010) believed that some characteristics that are rooted in Javanese cultures, such as *andhap-asor* (being humble while exalting others), *tanggap ing sasmita* (the ability to read the implied meaning of a statement), and *tata krama* (etiquette or good conduct) have also greatly influenced the way that the Javanese communicate and interact. Sukarno (2010) elaborates that people are expected to show the values of *unggah ungguh*, *tata krama*, *andap ashor*, and *tanggap ing sasmita* when interacting with others. By showing these values, it will not only minimise the potential for confrontation and conflict, but will also maintain a harmonious relationship while demonstrating respect and politeness to others. It is considered inappropriate and impolite for a person to directly express his feelings to others.

As discussed above, *unggah ungguh* has significantly influenced the ways that the unit members interact and communicate. Although Javanese is not the official language, many of the unit members use it as the language to communicate. It could be seen that the unit members still observed the correct language register when speaking to others. *Ngoko* and *kromo* were still used by the unit members in their daily conversations. Proper clothing, clear articulation, and correct intonation were also shown by the unit members when they interacted and communicated with their superiors. Even though they did not speak Javanese when addressing their superiors, *unggah ungguh* still played an important role as seen in their gestures, articulation and intonations. Furthermore, *unggah ungguh* also compelled the unit members to wait for the right moment to consult with their superiors.

Another aspect of Javanese culture revealed by the findings is *sungkan*. According to Geertz (1989), *sungkan* is derived from the Javanese view that all social relationships are
hierarchically ordered, and everyone has a moral responsibility to maintain and express this structure. Furthermore, Geertz (1989, p. 111) elaborated that “…a component of “respect” signified by three Javanese words, wedi, isin, and sungkan, which denotes three states of feeling that are considered appropriate to situations demanding respectful behaviour”. Wedi can be translated into English as ‘afraid’, and it is a fear response when someone encounters unfamiliar or unusual situations. Isin can be translated as shyness, shame, guilt, embarrassment and is a complex reaction signalling anxiety. While wedi and isin can be translated into English, sungkan is peculiarly Javanese, and there is no exact equivalent word in English or European languages (Geertz, 1989; Wierzbicka, 1992). Geertz (1989, p. 114) defines sungkan as “a feeling of respectful politeness before a superior or an unfamiliar equal. Sungkan is like isin only lighter. Sungkan is like isin, only without the feeling of doing something wrong”.

From the discussion above, unggah ungguh and sungkan are the manifestations of the Javanese concept of hormat or respect. Unggah ungguh and sungkan have guided the unit members in their interactions and communications. While the practice of positive cultural values has several positive outcomes, on the other hand, unggah ungguh and sungkan have created situations that critically affect the implementation of the SMS and the promotion of a safety culture. First, the unit members are reluctant to state facts. As discussed above in the section on the authoritarian structure, false information can jeopardise safety as well as the mission. Unggah ungguh and sungkan have made one unit member unwilling to state the true condition of his health as he was afraid that he would suffer adverse consequences. This situation is critical and a precondition for latent (undesirable) conditions to develop. For instance, in a flying mission, if the superior does not know that the pilot is unfit, the superior will order the unfit pilot to carry out the mission. In this scenario, it is obvious that an unsafe condition has already existed before the mission begins. As the superior has not been informed about the actual situation concerning the pilot, it is very likely that the superior will make an
incorrect decision. This may result not only in a mission failure, but it will be only a matter of time before an accident occurs. In a multi-crew aircraft, it is likely that other crew members will step in to take the place of the unfit crewman. However, in a single-pilot aircraft, the chance of an accident occurring is greater as the unfit pilot could experience a blackout or hypoxia during the mission.

Second, unggah ungguh and sungkan have discouraged members of the units from reminding superiors about issues or providing feedback and consulting with the superiors. This has made the unit members unable to say ‘no’ and they have become passive or unwilling to take initiatives. This situation has been created by the unit members’ efforts to show their respect and maintain harmonious relations with their superiors. Moreover, this situation has hindered the establishment of a safety culture. A strong positive safety culture requires the members of the unit to actively be involved in the safety program. The members are required to look out for and remind each other if they encounter a hazard or other risks that could potentially do harm to people and damage the equipment.

5.5.5 Coping with the Uncertainty

Most participants believed that military aviation is a very challenging world as people operate in an area that is essentially unnatural and beyond their comfort zone. Although there have been some advancement and improvements in aviation technology and training in order to eliminate human errors, the participants believed that there is one more critical factor that must be considered: God’s blessing. They contend that relying merely on advanced technology and improved training are not sufficient to achieve end states, as without a blessing from God, all efforts will be futile. To secure God’s blessing, religion plays an important role in this matter. Religion plays a crucial role and becomes an inseparable aspect of the unit’s daily activities. The influence of religion on military unit culture was evident during the interviews and
observation periods. During the interviews, many of the participants often uttered Arabic phrases such as *Insha Allah* (God willing), *Alhamdulillah* (Praise be to God), and *Bismillah* (in the name of God). These Arabic phrases seamlessly blend in with the Indonesian languages and are used in daily conversations. In addition, A2 claims, “Prior to commencing every activity, we begin with *doa* (prayer). We are hoping that God blesses us, and we can accomplish our task safe and sound”. Praying has become one of the unit’s formal routines, which can be observed during the morning and afternoon roll calls. The most senior officer of the unit heads the roll calls, and one of his responsibilities is to lead the unit’s personnel in prayer. Praying is also performed before personnel carry out flying duties and the prayers are led by the most senior officer on that flight.

All participating units allow their members to freely practise their respective religions and faiths. Not only do the units provide facilities but also a designated time is allocated for the members to practise their faith. Places to worship such as mosques, churches and temples are provided in all participating bases/units. There is an acronym *Ishoma* (*Istirahat, sholat, dan makan siang* or break, pray, and lunch), which means that units’ members are given an allocated time, 12-13 PM, to have a break, lunch, and pray. Moreover, the commanding officer of unit two orders those under his command to perform *pengajian* (reciting and teaching of Qur’an) on a weekly basis, every Wednesday. *Pengajian* is held after *Dhuhr* prayer (the prayer after midday) in the unit’s mosque. For other units, religious observance takes place every Friday, when the units’ Muslim members attend the Friday prayer service in their units’ mosques while non-Muslims members attend their own religious services in their own respective places of worship.

Hence, religion is an inherent aspect of each unit’s activity, which is evident in military ceremonies which always include a religious service. One example of the influence of religion and Javanese culture on the Indonesian military organisational culture is *selamatan*. *Selamatan*
is a religious ritual that is usually performed prior to the commencement of a special event, although it can also be held after the event. The purpose of the ritual is to secure a blessing from God so that the program or event can flow smoothly and that bad external power cannot interfere with or ruin the program. The ritual is conducted in the form of a ceremony, which begins with prayers and a sermon or speech and ends with a meal. A selamatan is held in the participating units before they deploy to other bases, conduct specific training such as night flight training, and carry out exercises.

In addition to religion, several participants believed that rules, procedures, and SOPs are some of the fundamental aspects that can be used to eliminate uncertainty. The procedures and regulations provide detailed guidelines for personnel on how to perform their daily tasks, so the members who are involved in a particular job understand their own roles and responsibilities. Moreover, the existing rules and procedures contribute to the establishment of a better and safer working environment. The rules and regulations should be disseminated and thoroughly explained to each unit member to ensure that they understand; in this way, to some extent, a safety culture can be established. This was acknowledged by participants as indicated in the quoted statements below.

I have been striving to implement the existing rules and procedures. I have put everything in order, from a small thing like the cleanliness of the workplace to the placement and storage of goods. I believe good management begins with good planning, well-ordered recording, well-organised crew qualifications, and implement rules and procedures in accordance with buku petunjuk teknis (technical manual) and SOPs, will improve our safety performance. (3I)

In this case, I am very proud of the current TNI conditions. Compared to other civilian friends, our situation is so much better. Prior to carrying out the job, we still check and
re-check, and have a briefing. As a technician, it is mandatory for us to implement rules in accordance with our SOPs procedurally. (4J)

Generally, our regulations now, especially our software, is far much better than in the past. Rules, procedures, and SOPs are fundamentally important, and they have to be thoroughly socialised and disseminated to the members of the unit, so they really understand. The CO is responsible for the implementation of those regulations, so his members are really aware of the important role of the rules and regulation in the workplace. Therefore, we have soldiers that are disciplined not because of a fear of punishments, but they realise and understand that safety culture starts with ourselves. Perhaps, we have witnessed an aircraft accident, and we think that the accident should not have occurred. We see that the accident occurs because there is some stuff that should not be on the poor aircraft. After the accident, we will look at our procedures and rules again, and for a time, we implement those rules and regulations, and our safety is improved. However, sometimes, some of the crews will try to drift out and violate those rules and regulations again. I am sorry it is a long explanation. (3P)

As part of the implementation of the safety regulations and procedures, the unit members conduct risk assessments before they commence every job, mission and training. The purpose of the risk assessment is to identify potential hazards that can harm people or damage equipment. It is mandatory for every unit member to conduct a risk assessment (usually risk assessment is conducted by the officers). If unit members identify potential hazards, they have to calculate the likelihood and the consequences of those hazards. In order to eliminate or mitigate those risks, the unit members are expected to suggest actions that need to be taken so the risks can be reduced and a mission or training can feasibly be carried out. The risk is
calculated and well recorded in the unit documents such as the unit daily flight report and the unit safety report. Every day, the CO signs the unit’s daily report, and this is sent to the higher command.

5.5.5.1 Discussion

The findings suggest that religion is considered as one of the methods that can be used to eliminate uncertainty. It is believed that religious and spiritual values can bring people closer to God and return critical situations and uncertainty to normalcy. Basically, most Indonesians believe in one supreme God who is the main source of spiritual values (Sutarto, 2007; Murtisari, 2013). In the traditional Javanese culture, the world is viewed as a part of a larger entity whose harmonious existence can be maintained by following a fixed formula known as *ukum pinesthi* / law of destiny (Murtisari, 2013). Mulder (2005, p. 86) stated that in *ukum pinethi* “all creation has to run its preordained course”. Murtisari (2013) further explains that in *ukum pinesthi*: God arranges for people and other creatures to live in a certain way; all living things exist for a reason; and people will have unpleasant experiences if they do not follow the path that has been preordained by God. People have no power to challenge God and must accept everything that has been granted including their destiny (Damayanti & Ardini, 2015); in Javanese terms, this is known as *narima ing pandhum* (Murtisari, 2013). Accepting one’s destiny willingly is everyone’s responsibility and is a way of maintaining the existence and the harmony of the entire unit (Murtisari, 2013). Geertz (1976) argued that *nrimo or trima* is one of three main values (the other two are *sabar* (patience) and *iklas* (sincere)) involved in *puntu* (calm). *Puntu* itself means “to think seriously about, or, better, to talk yourself into not feeling about something you would normally feel deeply about” (Geertz, 1976, p. 240). Geertz (1976) contended that *puntu* is a primary Javanese defence mechanism when dealing with unpleasant experience.
This study revealed that belief in one God has become the main source of the unit members’ spiritual values. The religious and spiritual beliefs are manifested in *doa* (praying) and other religious services. Since the unit members assume that they are powerless, *doa* and other religious services are to the means by which they communicate with their creator. It is expected that through *doa* and other religious services, they can secure a blessing from God and avoid adversity. In addition, the unit members also hold *Slametan* as another manifestation of their religious and spiritual beliefs. According to Geertz (1976), the *Slametan* is the Javanese version of the religious ritual, the communal feast, which symbolises the mystic and social unity of those people who partake of it. Through *Slametan*, people collectively incorporate their various individual experiences and social life together to minimise tension, conflict and uncertainty. Kistanto (2016) stated that the word *slametan* is derived from the Javanese word *slamet*, which is taken from Arabic *salam* (safe). The functions of *Slametan* are “to harmonize the horizontal as well as vertical relations of human to human, human to nature, and human to the Almighty Creator” (Kistanto, 2016, p. 293) and to protect people against the evil spirits that will make people unhappy, confused and sick (Geertz, 1976).

When dealing with ambiguity, countries are classified into two categories: high or low uncertainty avoidance (Hofstede and McCrae, 2004). Hofstede and McCrae (2004) explained that people in high uncertainty avoidance countries feel uncomfortable when facing unstructured situations. In order to minimise the possibility of such a situation, high uncertainty avoidance countries normally produce strict rules and regulations, take security and safety measures, and from the religious and philosophical perspectives, believe in one absolute truth. On the other hand, Hofstede and McCrae (2004, p. 62) pointed out that countries with “uncertainty-accepting cultures are more tolerant of opinions different from what they are used to; they try to have as few rules as possible, and on the philosophical and religious level they are relativist and allow many currents to flow side by side”. According to the GLOBE and
Hofstede studies, Indonesia is classified as one of the countries with low uncertainty avoidance, so, Indonesians are accustomed to and feel somewhat comfortable when facing uncertainty (George & Kwansah-Aidoo, 2017).

However, the findings revealed one interesting fact which, to some extent, is not in line with the result of the Hofstede and GLOBE studies. While there is no indication that the spiritual beliefs and religion aspects of the unit members have declined, the rules and procedures have been used increasingly by the unit members as an additional means of coping with uncertainty. This interesting fact indicates that the military’s belief that religion and spiritual beliefs alone cannot adequately cope with ambiguity. This fact emerged not only from the interviews with participants, but also from the analysis of several documents. Many rules, regulations, and procedures have been published in the last three years in order to help eliminate ambiguity and improve safety. The revised safety management systems handbooks, incident and accident investigation manual, safety reporting procedures, occupational health and safety manual, and risk management procedures are some of the examples of the safety documents that have been published and issued. Since early 2015, the unit members have calculated and assessed risk before the commencement of every job. Participants indicated that rules and procedures not only provide the members of the unit with clear guidelines for the job, but also offer other advantages such as: a better management system including safety systems, clear job descriptions and responsibilities, completion of tasks with nothing being omitted, and improvement of personnel discipline and personal safety awareness. Many participants acknowledged that rules and regulations are some of the military’s efforts to change the existing conditions, especially the unit safety performance. The military believes that it is necessary to be more pro-active, rather than reactive, in identifying potential hazards and taking preventive measures so that uncertainty when conducting missions can be minimised. This finding supports Susetyo et al.’s (2014) contention that some traditional characteristics of
Javanese culture such as *nrimo* and *pasrah* have been left behind by the Javanese people as they are becoming more assertive and open-minded. There appears to be a shift from a low uncertainty avoidance culture toward a high uncertainty avoidance culture, or in Helmreich et al.’s (1998) words, the behaviours are governed by rules and clearly defined procedures. In the case of aviation safety, this change can be seen in the positive attitude shown by the unit members in terms of minimising uncertainty while improving safety.

### 5.6 Summary

All participants believed that Indonesia has a national culture although it is a country with many different tribes, languages, and religions. Those very differences have helped to shape the unique Indonesian national culture as it is today. As Javanese is politically and culturally dominant, many of the characteristics of the Indonesian national culture are based on the Javanese culture. Those characteristics and their related behaviours have permeated the Indonesian military organisations. The Indonesian national culture, recognised as a predominantly Javanese culture, has significant impacts on the Indonesian military organisational culture as the behaviours and social interactions of the Indonesian military personnel have been much governed by it.

Analysis of the findings shows that some characteristics of the Indonesian national culture, which prevail on the Indonesian military units, have critically influenced military aviation safety. It reveals that those characteristics have a significant effect on the implementation of the safety management systems and the promotion of a safety culture. It is believed that some characteristics such as hierarchy, authoritarian structure, *rukun, unggah ungguh*, and *sungkan* have created a situation that prevents the creation of a safety reporting culture, a flexible culture, a learning culture, a just culture, and an informed culture. Moreover, the adoption of those cultural values has also created some sort of bureaucracy within the
organisations. However, the analysis of the findings revealed one interesting fact: the unit members are convinced and have recognised that rules and regulations, in addition to religion and spiritual beliefs, can assist them to eliminate or mitigate uncertainty. This finding is not consistent with the Hofstede and the GLOBE’s low uncertainty avoidance characteristics in which rules and regulations are regarded as less important when dealing with ambiguity or uncertainty. Perhaps, it is an indication that Indonesians have started to abandon some of their cultural values that are considered irrelevant or inadequate when dealing with today’s challenges. This finding is crucial as a change in the attitudes of military personnel will greatly assist the organisation to achieve one of its objectives: to improve safety performance.
CHAPTER 6

FINDINGS AND DISCUSSION: INDONESIAN MILITARY ORGANISATIONAL CULTURE AND SAFETY

6.1 Introduction

The first theme, the characteristics of the Indonesian national culture and safety, was presented and discussed in the previous chapter. Subsequently, this chapter will discuss the second theme, the characteristics of the Indonesian military organisational culture and safety. This chapter comprises several sections which present the findings and discussions of each characteristic of the Indonesian military organisational culture and the impacts of those characteristics on safety management systems and a safety culture.

6.2 Overarching theme 2: Characteristics of the Indonesian Military Organisational Culture and Safety

Based on the data analysis, six characteristics of the Indonesian military organisational culture can be identified. The first characteristic, punishment and reward, will be presented in section 6.2.1. Subsequently, the remaining Indonesian military organisational culture characteristics - blame culture, class structure, siap/can-do culture, safety education and training, and perception of safety - will be described and discussed accordingly.

6.2.1 Punishment and Reward

Punishment is used by a military organisation as one of the means of managing its members. Although three participants maintained that punishment was used as a last resort, other participants in all four units believed that punishment was one of the most effective methods for managing and organising members of the units. Several officers claimed that punishment
is a unique military characteristic that differentiates a military organisation from other organisations. 2M argued “Do not forget that we are military, so we must have a punishment system, in addition to persuasively asking our subordinates to do their tasks” whereas 3A claimed that “A soldier who makes a mistake must be punished”. Furthermore, 2M believed that another factor, such as punishment, was still necessary since it was evident that encouragement only was not sufficient to motivate subordinates to accomplish tasks that had been assigned to them.

Punishment has several functions. As one participant, 2H, contended “Punishment can preserve our military stance and keep soldier’s discipline high” while another participant, 3B, believed that “Punishment is one of the methods to keep our subordinates loyal to us”. Moreover, several participants revealed another function of punishment: it acts as an effective warning and deterrent for anyone contemplating the violation of rules and regulations. This was explained by one participant, 2L:

For us, we need to find out why he violates the rules. If he deliberately breaks the rules, he deserves to receive punishment. The purpose of the punishment is to remind him, so he will not make the same mistake in the future. Furthermore, the side effect of the punishment is to let other enlisted, privates and sergeants, know that breaking the rules cannot be tolerated and must be punished. (2L)

According to 4J, various forms of punishment are imposed on unit members, from the simplest punishment such as physical exercises to harsher forms of punishment that may include an administrative penalty. 2N gave one example of the simplest type of punishment: if a tool is misplaced by a unit member, no-one in the unit goes home until the tool is found.

There are some advantages and disadvantages of the punishment system. On the one hand, 4J believes that one of the advantages of the punishment system is that the enlisted man’s
response is fast when he receives an order. Moreover, since the unit members are afraid of receiving punishment, they usually pay more attention to their tasks. On the other hand, 4J claims that one of the disadvantages of punishment is that the enlisted man is only concerned with getting the job done without considering any other aspect of the job including safety. For example, if one enlisted man is given the task of fixing a leaking roof, he will directly take a ladder and climb to fix the roof without bothering proper safety equipment. In addition, one participant, 3A, argued that punishment creates an environment where the unit members are reluctant to report a problem.

At the moment, we still have an assumption that if we make a mistake, we have to defend ourselves as possible as we can. As we have experienced in our basic training, people tried to hide a mistake they made because if they report it, they will be punished. (3A)

Another negative effect of punishment is that the same mistake is likely to be repeated many times until someone finds out about it. One NCO participant, 4X, stated that other members of the unit will not realise that someone has made a mistake since the unit member who has breached the rules or procedures will conceal this and keep the mistake to himself.

I think, one negative effect of punishment is if every time people make a mistake, then he will be punished, there is a big probability that he is the only one who knows the mistake since he will not tell anyone else and admit it. (4X)

Most of the participants acknowledged that they would promptly punish any unit member who broke the rules. However, one commanding officer, 3I, stated that he had struck an agreement with his subordinates that he would issue an initial and then a second warning
before imposing punishment. Moreover, the unit members would be punished collectively to remind them that they had to stay together and look after each other.

If my unit members make a mistake, I will give them first and second warnings, and after that, I will punish them collectively. I think it is a very effective method for my unit. Ok, instead of punishing one person then you all forget, it means that you do not remind your friends. So, if you make this kind of mistake, you have to run, ok? In the end, the most important thing is that I have to establish an agreement with my members first. (3I)

Prior to giving punishment, several participants believed that it is crucial to know why the particular mistake has occurred. It is important to recognise the person’s intentions, that is, whether the mistake occurred due to human error or as the result of a deliberate violation of the rules. Subsequently, the leader of the unit can decide whether the person deserves to be punished or whether an alternative action is required to address the situation. 4X argued that “Actually, we need to ask him a question why he did that. If his intention was to harm others, he deserves to be punished. However, if he unintentionally did that because he misinterpreted the given task or misunderstood the statement, so it is still possible to make a correction”.

Besides punishment, a reward system has also been employed in the four participant units. There are two different attitudes regarding the reward system. On the one hand, one group believes that a reward has to be in the form of a certificate. For example, a reward certificate was given to personnel who found a crack in the aircraft engine when he was doing engine inspection a few years ago as mentioned by one participant, 4A. On the other hand, another group believes that a reward can be manifested in various forms as long as the purpose of the reward is to value and acknowledge the positive actions of personnel. One participant, 2L, explained:
“One form of the rewards in this unit is if all flights finish earlier, the unit members can go home earlier. For instance, the unit members start working at 6 am, normal working hour starts at 7 am, and all flights have finished at 12 pm. After that, if the unit members have conducted all post-flight checks to ensure that everything is ok, we allow them to go home at 12.30 pm, (Normal close of the business hour is at 15 pm). So, this is the reward that we can give to our members”. (2L)

However, most participants claimed that punishments were given out more often than rewards. In all units, more emphasis was placed on punishment rather than reward. One participant, 3A, affirmed “I think, we still cannot avoid punishment system until now. Based on the lesson that I have learned from the safety course, we are not encouraged to employ punishment. However, it is difficult not to implement punishment”.

6.2.1.1 Discussion

According to the findings, the unit members believed that punishment is one of the unique characteristics that differentiate the military from other organisations. One participant explained that the punishment system could be a result of indoctrination during basic military training. During basic military training, new recruits are closely supervised, and their behaviour is highly constrained (Novaco et al., 1989). As the new recruits come from the civilian population, they need to adjust to military life and its rules, regulations and traditions. It is expected that at the end of basic training, the recruits will have acquired the basic skills, behaviour and attitude deemed crucial for the specific demand of military service. In order to fulfil all the requirements, the new recruits are taught with strict military discipline which involves punishment as a means of addressing misconduct. Various forms of punishment are
imposed during the basic military training. However, punishment is also administered in the operational units.

Findings indicate that participants are divided on the issue of punishment. One group, comprising the majority of participants, maintained that punishment was the most effective method of dealing with personnel’s violation of laws and procedures. They contended that punishment serves several functions which are congruent with Wood’s position (2003). Wood (2003) pointed out that deterrence of others, revenge, and correction of the individual are the main reasons for punishment. The findings revealed that another purpose of punishment is to discipline the unit members. Wood (2003) argued that the word ‘discipline’ has two different meanings. When referring to a person, the word has a negative connotation as it implies some sort of punishment. The second meaning of the word has a positive connotation as it refers to someone or a group that has consistently complied with the existing regulations and procedures that guide their actions. For the purpose of this study, the word ‘discipline’ is used to refer to punishment. Disciplining a member of the unit means giving the member punishment in order to correct a wrongful action or behaviour. It also implies that discipline is a means of forcing the unit members to comply with the existing rules and procedures (Branham, 2010). Branham (2010) argued that the management of an organisation considers discipline as a “quick fix” strategy to improve safety, especially for those organisations that experience many accidents. The strategy may work and can change the behaviour of the members in the short term. The strategy aims to eliminate unsafe actions in order to reduce the probability of reoccurrence.

The findings suggest that punishment is considered by the military as an effective means of managing its personnel. This suggests that the military still applies McGregor’s (1960) conventional concept of management, known as “Theory X”. According to McGregor (1960), management must direct, control, and motivate its members’ behaviour in order to meet the needs of the organisation. Persuasion, control, punishment, and reward are some of the
management’s active interventions to ensure the members of the organisation fit the organisation’s needs – otherwise, the members will be passive or even resistant. Moreover, findings also demonstrate that the military applies the hard approach in order to direct the behaviour of its personnel. Close supervision, threat and coercion, and tight controls over behaviour are methods used to direct the behaviours of the members (McGregor, 1960).

While many participants believed that punishment can provide some benefits, many scholars and professionals challenge this view. Woods (2003) argued that there are many reasons why punishment can have negative outcomes, which include: punishment creates unreasonable fear within the members of the organisation; punishment does not change the circumstances in which the accident has already occurred; and punishment inhibits the creation of good internal communications within the organisation. Branham (2010) asserted that from data and experience, it is evident that when management give more attention to discipline and over-emphasis the enforcement of safety, this can actually have negative impacts on organisational culture. Employees become disengaged from the program since they perceive safety as looking for employees’ mistakes and imposing compliance through fear and threats. As a result, management and employees become separated and, over time, working relationships, communication, and trust between the management and employees deteriorates. This situation makes it difficult to achieve sustainable safety improvement. McGregor (1960) believed that the conventional concept of management is not sufficient to motivate people. On the contrary, it can have some adverse effects such as antagonism and failure to meet the management’s objectives.

Considering some potential disadvantages of punishment, the second group of the participants advocates that punishment should be given if the unit members deliberately violate the existing rules and procedures. They argued that mistakes must be thoroughly investigated prior to imposing punishment. According to Reason (1990) and Shappell and Wiegmann
(1997), the first thing to consider when investigating unsafe acts is the intention of those committing them. They classify unsafe acts into two categories: unintended and intended actions; both actions involve errors (slips, lapses, and mistakes) and violations. On the one hand, “unintended unsafe acts are characterised by actions that unwittingly deviate from planned intentions due to failures of execution or memory and manifest as either slips or lapses” (Shappell & Wiegmann, 1997, p. 273). While slips are unsafe acts caused by attention failure, lapses are unsafe acts resulting from memory failures. On the other hand, mistakes and violations are categorised as intended unsafe acts. A mistake is deliberate behaviour that begins as planned but fails to achieve the intended outcome because of planning or problem-solving failure. Unlike mistakes, lapses and slips, violations are unsafe acts that are conducted intentionally and the people committing them are aware that they are in breach of the existing practices considered essential for carrying out operations safely. In the case of this study, a few participants believed that a fair evaluation of unsafe acts, whether errors or violations, should be conducted before superiors decided to punish their subordinates.

Another factor revealed by the findings is the notion of reward. Although the participating units have had little experience of rewards, the participants believed that a reward system could be used to encourage subordinates to display good conduct and discourage unsafe behaviour. A reward does not have to be in the form of a certificate but can be manifested in other forms that include intangible rewards or recognition. The reward system can show management’s appreciation of the subordinates’ positive actions or achievements. McGregor (1960) asserted that performance appraisal not only acknowledges the unit members’ contribution to organisational objectives, but also has positive effects on the members’ self-fulfilment and egoistic needs. Unfortunately, the participating units exercise more punishment rather than reward as a means to correct misconduct and enforce compliance.
Taking into account all factors that have been discussed above, the findings revealed some of the negative influences of punishment. Unwillingness to report a problem or having poor reporting systems, distrust of management as the subordinates are fearful of punishment, and lack of transparency or poor communication between superiors and subordinates are some of the negative impacts. These issues have significantly influenced the implementation of the safety management systems and the promotion of a safety culture. According to Wiegmann et al. (2004) and Reason (1990), a fair evaluation of both safe and unsafe behaviour is one of the main components of an organisation’s safety culture. Rewards and punishments or penalties are given based on a fair evaluation. Furthermore, Wiegmann et al. (2004) elaborated that a safety culture should be manifested in the organisation’s systems to encourage safe behaviour and deter unsafe behaviour. Rewards and punishment are not only important elements of a safety culture, but are also essential for safety management systems (Frazier et al., 2013; Hsu et al., 2008; Pidgeon, 1991). Management is expected to reward employees who excel in meeting production goals without compromising safety procedures. Branham (2010) advocated that it is better to replace a punishment or penalties system with a coaching system. In this coaching process, members at all levels of the organisation would be expected to closely engage in the work process, so they can provide consistent and regular feedback (coaching). The feedback should be constructive and positive as it will motivate others to practice work safety, which will ultimately reduce risks and hazards.

6.2.2 Blame Culture

In an organisation with a culture of blame, the initial intention to alert colleagues about a mistake that has occurred so that they can take precautionary measures will backfire on the person who reports it. According to one participant, 3P, blame culture cannot be separated from punishment culture. During an interview, one member of a unit who had reported a mistake
that he had made felt that he has become the defendant. Hence, anyone who reports a mistake that he has made will be exposed to other unit members and, subsequently, people will talk about him in negative rather than positive terms. 3P explained:

I hope that crews who report their own mistakes are not to be blamed. They intend to alert others, so leader should not blame people who report it. They want other people not to repeat the same mistakes and know their environment. However, our culture is when there is safety information about the incident or that contain information about the danger of certain thing, people promptly ask what is really going on? So, they will find out, and as a result, the person who reports the incident will be exposed to other unit members, and he feels that he becomes the defendant even though he is honest and transparent.

Although there have been crucial changes in the process of incident or accident investigation, several participants believed that the findings of an investigation still contained elements of a blame culture. In addition to disclosing the most probable cause of the incident or accident, one participant, 3T, mentioned that the findings also included a party who contributed to the incident or accident. This creates an assumption that the party, be it a person or organisation, is the main factor that causes the incident or accident and therefore should be blamed.

Different divisions within an organisation may have different attitudes regarding errors and blame, which contribute to the creation of a blame culture. 3A revealed that there was one division where it was considered an achievement to discover someone else’s mistake. From the safety perspective, this attitude prevents the learning of a lesson from someone’s mistake. 3A pointed out:
Perhaps, I can say that for this division finding someone’s mistake is an achievement. So, everyone who has dealt with this division has to be punished whether the person is proven guilty or not. Even if he is not guilty, he has been noted in the division’s record, and usually, he will be charged with an administrative penalty that sticks with him forever.

The blame culture, where error will be followed by punishment, has resulted in members of the unit being reluctant to report problems. 3P stated, “One effect of culture to blame is unit members are unwilling to report problems, especially their mistakes. They do not want to open themselves up and try to hide their mistake in order to avoid punishment.”

6.2.2.1 Discussion

The findings suggest that a culture of blame exists in the units and this makes most of the personnel feel uncomfortable. The initial intention to communicate safety information and increase the safety awareness of co-workers failed since the reporters of incidents or accidents will receive some kind of negative reaction. According to Khatri et al. (2009, p. 314), a culture of blame is defined as “a set of norms and attitudes within an organisation characterised by an unwillingness to take risks or accept responsibility for mistakes because of a fear of criticism or management admonishment”. Wood (2003) posited that punishment is part of the blame cycle. People assume that if an error occurs, it is the result of carelessness, laziness, or something else related to personal characteristics. Hence, someone has to be blamed for the occurrence and punished. Nevertheless, this does not resolve the problem as errors are results, not causes. The organisation needs to identify the causes and find the best solution to rectify the situation. Blaming someone for an error caused by a systemic problem will not solve the existing problem.
Pidgeon (1998) contends that blame has two possible outcomes for safety. On the one hand, blame can have a positive outcome when it can change and motivate representatives of organisations to make a change for the better. Hence, the organisations are not only responsible but also accountable for providing a safe work environment. On the other hand, organisations will produce negative outcomes when blame is used as one means of defending favoured institutional arrangements (Pidgeon, 1998) and assigning accountability to someone. In this regard, the blame will create situations in which people start pointing fingers at others to avoid being punished or reprimanded. Moreover, a culture of blame promotes fear, distrust and dishonesty (Khatri et al., 2009; Pidgeon, 1998). Scott-Cawiezell et al. (2006) asserted that a culture of blame is counterproductive and forces people to be unwilling to report or cover up problems and bury any errors. In this type of culture, it is most likely that an organisation imposes sanctions or punishment in order to enforce compliance and safe work practices. Khatri et al. (2009, p. 315) believed that no organisation intentionally promotes a culture of blame; rather, it is a result of “a bureaucratic management style that is highly rule-oriented, compliance-driven, and focused on assigning blame or accountability to individuals even for system-level failures”.

In the case of this study, the findings clearly demonstrate that a blame culture has created an environment in which the unit members are reluctant to report a problem. This situation is not ideal for promoting a safety culture. As Singer et al. (2003) claimed, one of the key components of a safety culture is a no-blame culture. Organisations with a good safety culture will respond to problems by focusing more on finding solutions to improve performance rather than blaming someone. Organisations are required to encourage open dialogue and promote a supportive environment to facilitate safer work practices (Khatri et al., 2009). Moreover, the organisation must provide a learning environment in which safety information
is disseminated to all members, and constructive feedback is taken seriously. Subsequently, the organisation is willing to take necessary corrective actions to improve its safety performance.

6.2.3 Rank Structure

In a military organisation, there are two classes of personnel based on the rank: officers and non-officers (NCOs and privates). In the participants’ units, the lowest ranking officer was the second lieutenant, and the highest was lieutenant colonel, who was the commanding officer of the unit. Non-commissioned officers comprised enlisted men (private rank was the lowest and corporal was the highest) and non-commissioned officers (the lowest ranking NCO was a sergeant, and the highest was a chief warrant officer). Two participants, 2L and 5Y, believed that the class system (officers, NCOs, and enlisted men) in a military organisation is based on the level of responsibility. They stated:

So, we have officer caste, NCO caste, and enlisted caste. It means that NCO and enlisted only do whatever orders are given to them without thinking. But, I think it is true when we are on the battlefield. If NCO and enlisted are given a chance to think, they do not want to go to war. Therefore, when NCOs go to their basic training, they have been indoctrinated to do whatever orders have been given to them. For example, if they are asked to roll, they will roll. As a result, whatever the order is, they must do it. (2L)

Perhaps, my opinion, the differences come from ranks. It is so obvious the differences between officers, NCO, enlisted, and public servant. It might because of the recruitment process, the formation process, and even the resource itself. The requirements to become soldiers are different. I think that is why there are some differences. Normally, enlisted men are asked to focus more on conducting the given orders rather than
considering safety. It is the responsibility of senior NCO or officer that works around him to think about safety. (5Y)

According to the interviews, all officers believed that NCOs and enlisted men needed to be thoroughly supervised, reminded every day, had low safety awareness, and even found it difficult to voluntarily participate in the units’ safety program. One participant, 4J, explained that strict supervision was required because “Sometimes since this is a routine work, enlisted men feel very confident, assume that they have memorised the procedures how to do the job, so they do not need book or checklists, and even not using the defined parameter”. 2K stated that subordinates must be reminded every day to wear visibility vests, personal protective equipment (PPE), and other working procedures even though they receive a briefing before the commencement of each task. 2L asserted that although he ensures that all subordinates have complied with the unit regulations every day, he still finds enlisted men who try to break the rules. There is poor awareness of individual safety and this needs to be improved. Several officers believed that their subordinates still do not understand why PPEs are important and must be worn all the time during work. It is most likely that PPEs are used in the workplace only because subordinates have been ordered to do so.

Officers believed that enlisted men and NCOs’ backgrounds have significantly influenced their current behaviour. The subordinates’ level of education, training, knowledge, and living environment are factors contributing to their behaviour. 4J claimed that knowledge is one of the basic aspects that shape human behaviour while 2O believed that environment, starting from family and extending to the current environment, also played a crucial role in influencing someone’s behaviour. Regarding safety education and training, Indonesian military personnel have never received formal safety training except for officers who have attended safety training that is conducted in-house and overseas. One enlisted participant, 3T, claimed
“I have been in the service for more than fifteen years and until now, as far as I know, a safety course is provided for officers only”. 3R asserted that “Actually, not everyone has the same opportunity in our military organisation; for example, a safety course is exclusively for officers only. However, safety education is a must for every military personnel including enlisted and NCOs”.

NCOs and enlisted men were excluded not only from safety training but also from some of the unit forums and activities such as briefings and simulator sessions. All participant units ran regular briefings that were attended only by officers in each respective unit. Subsequently, officers through the existing chain of command would disseminate results of the meeting to their NCOs and enlisted men. In unit three, simulator sessions were conducted without involving the flight engineers, who were mostly NCOs. This exclusion of NCOs prevented them from acquiring other skills and improving their professionalism. Three participants stated:

To be honest, I, as a flight engineer, do not know what the indications and the effects on aircraft if we have an engine flameout. Should it occur but we do not know what to do? Proper actions are a must if we have to deal with the real emergency situation. (3S)

I believe there will be a lot of exercises given by the instructor that we can practice in the simulator. So, we know and understand the indications and the effect on aircraft if we really experience an emergency situation in the air. Now, we know nothing, as we have never trained in the simulator. (3T)

We are part of the cockpit crews; flight engineer is part of the cockpit crews. Alhamdulillah (praise be to God), we have been flying under normal conditions so far. We only know emergency procedures from the checklist. If there is an engine fire,
should we wait and learn from a real engine fire? We have a simulator, but it is only for the pilot. We are part of the cockpit crews. (3V)

6.2.3.1 Discussion

Based on the findings, the unit members are classified into two broad class or rank structures: officers and non-officers. Each rank has specific roles and responsibilities. As discussed in the previous chapter (section 5.5.1.1), the basic purpose of a hierarchy or rank structure is to create stability since it defines the job descriptions, roles, and responsibilities of each member.

The findings revealed two prominent characteristics of these two classes. First, the officers assume that subordinates need to be closely supervised all the time. Based on the interview data, this implies that the officers do not fully trust their subordinates. Various reasons and experiences have created this situation. In the field, the officers discovered that some of their subordinates attempted to do their job without following proper procedures or a checklist. Although those subordinates are senior NCOs who are qualified technicians, this does not guarantee safety. The job requires the unit members to follow the existing procedures or a checklist. The checklist is used to ensure that proper procedures have been carried out and nothing has been omitted. As the subordinates’ job is to maintain and prepare the aircraft, these personnel are the frontline employees. Not following the proper procedures can cause an error which then jeopardises the flying operations. Perhaps, the lack of safety culture awareness has caused the incident. Wiegmann et al. (2004) contended that an organisation with a good safety culture will ensure that all of its employees not only clearly understand their own roles and responsibilities but also their essential roles in promoting safety. The employees should be given to understand that their work involves not only completing the assigned tasks but also preventing an accident. Moreover, it is necessary to remind the employees how crucial their jobs are, as it determines the safety and lives of other members of the organisation.
Second, subordinates, in this case, the non-officers, are passive and are reluctant to take safety initiatives. As explained in the previous chapter, subordinates will perform their jobs when orders have been issued. In this situation, subordinates are passively engaged in the work processes as they perform tasks as ordered. According to Frazier et al. (2013), employee engagement is one of the key elements of a safety culture. Employee engagement means involving the employees in their work processes and safety-related issues inherent in the work processes. Workplace hazards can be reduced when employees are actively engaged in the work and safety processes. It is likely that work-related injuries will be reduced when employees have sufficient resources and are actively engaged in the work processes (Dollard and Bakker, 2010). An organisation whose workers voluntarily engage in safety performance behaviour is more likely to have a positive safety culture than an organisation whose workers are forced to comply with procedures and regulations (Christian et al., 2009; Frazier et al., 2013). This is because workers who voluntarily participate will be more motivated to engage in safe practices.

One of the methods used to engage personnel in a safety process is a safety meeting. In the meeting, management and employees can officially raise and discuss safety issues. Moreover, a safety meeting can be used as a forum to exchange and disseminate the latest safety information. Hale et al. (2010) contended that dialogue between employees and management is important as both parties can learn and take corrective actions if necessary. Wood (2003) suggested that safety meeting should be conducted regularly. Unfortunately, the findings suggest that safety meetings in the participating units are attended by officers only. Flight line officers represented subordinates who worked in the field. As discussed in the previous chapter, the hierarchical structure does not allow non-officers to attend any formal meeting, unless requested by the CO or authorised officers. The results of meetings are
disseminated by the flight line officers. The exclusion of the units’ personnel also applies to several other programs such as simulator and safety training.

6.2.4 Siap/Can-do Culture

A ‘can-do’ approach is one of the prominent characteristics of military culture. 4J argued that "As military personnel, the most important thing I need to say when I receive an order is to say ‘SIAP’. Any issue that potentially hinders our task is another matter. First, we need to get the job done by any means". Military personnel are expected to be able to do everything; as 3I pointed out, “Especially in our organisation, they treat us like “SUPERMAN”. We must be able to carry out every given order although we do not have the expertise to perform that task”. 4J believes that "Hierarchy in the military means that any person with lower rank has to be able to carry out an order given by his superiors. Getting the job done means that we are showing loyalty and respect to superiors". 6A stated that getting a job done was important as it determined someone's future career. Although members of the units conducted risk assessments before performing their tasks, the can-do culture disregards the risk associated with a task as they give greater priority to getting the job done and satisfying their superiors. It is evident that members of units are willing to take greater risks for a variety of reasons.

6.2.4.1 Discussion

The findings indicate that a siap-mentality in the military will create a must-do culture. It is unlikely that subordinates will refuse to obey an order even though they do not have the expertise to perform the task. It is argued here that numerous factors have significantly shaped and created this culture. As previously mentioned, military personnel are trained and prepared for war. Although the military finds itself in a state of peace, some of the organisational
processes that occur in the military organisation are simulated to resemble wartime operations. For example, when delegating jobs, the military exercises centralised control or a command system. The basic assumption underlying centralised control is that it creates stability. In a war zone, leaders are required to make a decision quickly in the interest of the security and safety of their members. All members are to comply with the decision that has been made. This kind of scenario is introduced to and instilled into all military personnel from the outset when they are new recruits attending initial basic military training. Subordinates are strictly prohibited from disobeying an order since there are military rules and procedures in place that govern this particular matter. It is not uncommon when the military personnel say *siap* when they are ordered to perform a job although they are not familiar with it or do not have the expertise. If they refuse the order, it will significantly influence their working performance assessment, and in the worst case, they can be discharged from the service.

In addition, there are several factors in the national and organisational cultures that significantly influence the establishment of a *siap* culture. As discussed in the previous chapter, several characteristics of the Indonesian national and military organisational cultures such as *sungkan, asal bapak senang* (ABS), *rukun*, authoritarian structure, class or rank structure, and punishment have contributed to the creation of this culture. While the unit’s members fully understand this situation, from the safety perspective a *siap* culture inherently creates some challenges for the military. According to Falconer (2005), a can-do attitude has two sides; it may be a great strength while, at the same time, it may be a great weakness. Hopkins (2006) argued that a can-do mentality and a centralised control or command system depend upon the context. In the context of military operations, both unique characteristics of the military culture are appropriate for a military organisation. However, it is less appropriate when implemented in non-operational settings or in peacetime. A can-do mentality implies that a mission or getting the job done is the top priority. Falconer (2005) asserted that the can-do mentality is a factor
that encourages an individual to be confident in his/her ability to carry out an order. In the case of this study, it is obvious that a *siap*-attitude is less than appropriate since the units are in peacetime and this attitude can undermine safety.

### 6.2.5 Safety Education and Training

In addition to those cultural factors, most participants believed that the lack of safety training or education has resulted in poor individual safety awareness. At the time of this study, only a few officers had received formal safety training or attended a safety course in their respective units. Therefore, it was a quite challenge for those officers to provide safety training for all members of their units, given that they had their own daily tasks to accomplish. 1B, a unit's safety officer, stated, "Being a unit safety officer is a challenge. On the one hand, I am responsible for ensuring that working conditions in this unit were safe. On the other hand, I also have to ensure that I can accomplish my own daily duties on time. It is a very demanding job since individual safety awareness of most of the unit's members is still low". In order to successfully implement an SMS, Stolzer et al. (2008) maintained that the individual has to be trained in a standardised SMS. The situation in the unit creates unprecedented challenges for the promotion of a safety culture and implementation of the SMS because members have varying degrees of education. 4A contended that "Basically, all members of the unit know that safety is important. However, the members’ applications of safety in the field are various. Personnel’s various educational backgrounds, culture, and their home environments give them different perceptions and implementation of safety".

### 6.2.5.1 Discussion

The findings advocate that only a few officers from four participating units have received formal safety training. Formal safety education and training in the Indonesian Air Force, in the
local term known as *Kursus Keselamatan Terbang dan Kerja (Suspa Lambangija)*, are regularly conducted two times in one year. In addition, the organisation regularly sends a few officers to other countries such as Australia (Royal Australian Air Force), The USA (The United States Air Force), Singapore (Republic of Singapore Air Force), India (Indian Air Force), and many other countries to undertake safety training. Safety education or training incorporates various kinds of safety courses that include: Safety Officer Course, Aviation Safety Management Systems (ASMS) Course, Crew Resource Management Course (CRM) Course, Aircraft Incident Accident Investigation Course, and Airworthiness Course. As mentioned in section 6.2.3, the in-house and overseas safety courses are intended only for officers. Organising and encouraging people to attend a safety course demonstrates that the organisation not only fully understands that safety knowledge is important, but also has made serious attempts to improve its safety performance. Frazier et al. (2013, p. 17) defines safety training as “a program that includes all necessary safety information, adequate practice, and consistency”. Wood (2003) maintained that safety education and training are an important part of an aviation safety program. He gave several reasons for the importance of safety education and training. First, safety education and training cover various aspects of aviation which include the handling of hazardous material (HAZMAT). HAZMAT training is essential as some substances can pose significant risks to health, property, equipment, and environment if not handled properly and safely. Fuels, toxic chemicals, and biological and chemical agents are some of the examples of HAZMAT substances. If people mishandle these hazardous materials, the result can be destructive as it can cause injuries, serious health problems, and even death. Moreover, hazardous materials can also cause damage to equipment, property, buildings, and environment if misused or mishandled.

Second, new members (pilot or maintenance technician) will join the organisation to replace those who leave. Every new member should be introduced to basic information about
safety. Some of the basic safety information includes general information about hazards in the work area, organisation safety rules and policies, emergency response plans, and other safety-related practices and procedures. Third, safety education and training should be given to unit safety officers to enable them to carry out these additional duties. Hence, it is unlikely that the unit safety officer will be able to carry out his/her safety duties properly without receiving the appropriate education and training. Fourth, an incident or accident can occur at any time, and it requires a correct response to minimise the impacts. Mitigating or eliminating the cost of an incident or accident requires correct pre-accident planning and this can be done properly if the unit safety officer has received safety education and training.

According to Burt et al. (2009), there is evidence that a safety training has positive outcomes, such as personnel’s improved attitude toward safety and a reduction in lost-time accidents; whereas, one of the reasons for the occurrence of accident is the inappropriate and inadequate safety training. Christian et al. (2009) found that safety knowledge was strongly related to safety performance behaviour since knowledge has a direct influence on performance behaviour. Employees who know how to perform their jobs safely, such as handling hazardous materials, and emergency procedures, are most likely have a higher motivation to behave safely. This, in turn, will greatly assist the organisation to improve its safety performance as well as reduce the number of incidents or accidents.

The findings of this study revealed that the manifestations of safety behaviour by the unit members are varied. Many factors have contributed to this phenomenon, one of which is safety knowledge. Several officers from the four participating units had received formal safety education and training, and subsequently, some of them became unit safety officers in their respective units. The interviews revealed that most of the unit safety officers face similar challenges in their jobs. They acknowledged that the unit members’ safety knowledge was one of the factors that prevented the successful implementation of a safety program and the
promotion of a safety culture. A lack of safety knowledge can cause people to make errors. As Braithwaite (2011) argued that poor or incomplete training and a lack of knowledge about current practices are factors that lead to errors. In addition, Braithwaite also contended that the organisation needs to offer its members not only basic safety education and training but also a safety management system. The successful implementation of an SMS is greatly influenced by the active roles of the unit members in carrying out their own responsibilities. Each member must clearly understand his/her tasks that are defined in the SMS. This can be achieved by providing standardised safety management training to all members.

6.2.6 Perception of Safety

Safety perception is one of the important factors in promoting safety culture. Safety perception will lead people to engage in appropriate and safe behaviour when conducting daily activities. The findings of the interviews indicated that all participants unanimously believed that safety was one of the critical factors when accomplishing tasks and could not be undermined as flying is inherently a dangerous and high-risk activity. This was acknowledged by some participants as indicated in quoted statements below.

I believe safety is very important as we are operating aircraft which means we are also operating in an area that does not belong to us and against our nature. Therefore, safety is very critical for our safety. (1A)

Important! Safety is number one, and other businesses come after that. Safety is important not only in our workplaces but also everywhere. (4A)

Safety, I think, is a basic instinct for any living creature. Every living creature has its own unique way to be safe. Animal also has a feeling of safety and if the animal
encounter predator, it will run, and it is the implementation of safety. So, safety in every aspect is very important and a basic instinct for a human. (3A)

In my office, for sure, safety is very important. All the hard work that we have done is nothing if at the end there is a safety issue. Safety is my primary concern in running the business here. (6A)

Efforts to accomplish tasks safely have been made by all participating units. In the participating units’ hangars, yellow and white lines are used to designate a working area, walking area, aircraft parking area, and other maintenance facilities as well as storages. Work tools were well organised, and a tools management system was in place to assist personnel with their daily tasks. Many safety slogans and posters were displayed on the hangars’ walls while safety publications were listed on the safety board. Moreover, the emergency evacuation plan was displayed on office walls and provided clear instructions to direct and guide unit members to a safe area in the event of an emergency. All ground crews and maintenance wore their working suits, and pilots who had flying duty wore their flying suits. Other personnel who worked in the flight line wore eyes and ears protection, safety shoes, high visibility clothing and any other personal protective equipment. Briefings led by the most senior officers were held prior to the commencement of every job.

Nonetheless, the unit personnel’s perceptions and understandings of safety varied. The personnel’s backgrounds, level of education, and experiences are some of the factors that influence personnel’s level of understanding of safety. This situation was recognized by two participants who claimed that:

Personally, everybody wants to be at the highest level of safety, but not all of them understand how to achieve it. This can be caused by the different knowledge that
everybody possesses and education background. Every unit member might know if they want to enter runway they have to check their vehicle’s tires. However, not all the unit’s members understand the reasons behind it, why we have to get off the car and then check out all the tires. By providing the subordinates with the right explanation, it will open their minds. (2G)

I believe it takes time to promote and establish safety as it cannot be created instantly. It takes time because the backgrounds of the human resources have a significant impact. People who come from the high civilised society with a higher degree of education will have a better understanding of safety than the ones who come from the remote areas with a lower degree of education. Therefore, it requires a lot of efforts in order to have the same level perception of safety. (2H)

In addition to those factors above, 1B argued that his unit’s personnel had also been influenced by the ambient culture in which where they lived. Some of the influences were negative which created undesirable effects and destroyed the safety culture that had been promoted by the units. Furthermore, most of the participants contended that their subordinates were lacking self-awareness in regard to safety even though those subordinates maintained that safety was important. Therefore, they believed that their subordinates needed to be reminded about the importance of safety every day. Some participants mentioned:

Every morning roll call, we usually remind our subordinates about safety. When we go to the flight line, again, we repeated and emphasised all the points that we have told earlier. (4A)
We always remind our subordinates the importance of safety every morning roll call. They know that safety is important but, practically, everybody is different when it comes to the implementation of safety. For instance, two people saw a glass was put on the edge of the table. A guy who cares about safety would take action and put that glass on the middle of the table, so the glass would not fall whereas, another guy who did not care would leave the glass as it was. (5A)

A Safety Management System (SMS) is a framework that can provide the organisation with the ability to comprehend, develop and manage safety systems proactively (Stolzer et al., 2008). Unfortunately, almost more than half of the participants did not fully understand the concept of the SMS, maintaining that they had never received formal training or education regarding the SMS. On the other hand, some participants argued that the SMS was an important means of achieving an organisation’s objectives, that is, achieving zero accident. This was contended by two participants:

Safety Management System (SMS) is a system that was built and aimed to achieve zero accident. However, they are only written documents or rules toward zero accident. The most important aspect of the SMS is command commitment and doers. If we want to build a good safety system, the leader has to support it, and there should be clear regulations. Firstly, the organisation must have clear regulations and command commitment comes after that. (E1)

I think SMS is management’s tool to secure and achieve its organisation’s safety objectives. The SMS rules and regulates members of the organisation which bound them with the established organisation’s systems and rules. (C1)
According to Euro Control (2008), an SMS is indicative of the ability to achieve safety, while a safety culture refers to the commitment to achieve safety. Most participants agreed that the SMS and a safety culture were two inter-dependent entities and the SMS could not work if the organisation did not possess a safety culture. Three participants explained the relationship between the SMS and a safety culture:

I think safety culture is part of the SMS. The SMS and safety culture are strongly related one to another. The SMS is created to promote and establish a safety culture. (5Y)

I think the basic requirement to have safety culture is to comply with rules or regulations. Actually, safety is more on how we comply with rules. I think the SMS provides us rules, regulations and procedures that we need to comply with. (3A)

The SMS and the safety culture have a strong relationship because no matter how good a safety system may be, it will not work if people in the organisation do not have a safety culture. People need to understand what the SMS is, and what objectives the management wants it to achieve it. If the people do not understand nor have a safety culture, the management will not be able to achieve its objectives and even nil. (3Q)

6.2.6.1 Discussion

According to the findings, all unit members fully understand that regard for safety is fundamental to the conduct of daily activities, not only in the workplace but in all daily activities. This finding is congruent with Maslow’s (1943) belief that safety is one of the basic human needs. Essentially, people constantly seek safety and stability as they prefer to encounter the known rather the unknown, the familiar rather than the unfamiliar things, and the manageable rather than the unmanageable (Maslow, 1943).
All officers emphasised the importance of safety in their workplace, and one of the units’ objectives is to create a safer workplace for all. Based on the researcher’s observations, all participating units have made some effort to establish safe workplaces. Safety slogans and posters, markings on hangar floors to designate working areas, the use of tool management systems, and equipping the unit members with personal protective equipment are some of the efforts made to improve safety in the units. Moreover, the safety efforts include increasing the safety awareness of the unit members and improving individuals’ attitudes toward safety.

Rundmo (1996) opined that the work environment and working conditions are important factors in encouraging safe behaviour from members of an organisation. Providing safe working conditions and work environments demonstrates that the organisation takes safety seriously which will significantly influence the perception of the members regarding safety. This, in turn, will motivate the organisation’s members to behave safely and improve their safety performance. Conversely, the organisation that disregards safety will create a negative attitude among its members with respect to safety.

However, even though the participating units have striven to provide a safe work environment and working conditions, the attitudes and perceptions of the unit personnel regarding safety and safe practices vary. As discussed in the previous section, many factors including safety education and training, and the living and working environments, have contributed to this situation. According to Kani et al. (2013), in general, the Indonesian government has not paid much attention to health and safety issues although the data indicates that there is a high rate of accidents in the workplace. In their study of the construction industry in Indonesia, Kani et al. (2013) found that more than fifty percent of the construction workers had low levels of education and had not received any safety training. Regarding land transportation, the data from the Indonesian Central Bureau of Statistics (BPS, 2016) showed that although the number of traffic accidents from 2012 to 2015 had steadily declined, this
number increased dramatically from 98,970 cases in 2015 to 106,129 cases in 2016. There was a total of 136,000 fatalities between 2012 and 2016. In 2016 alone, the fatalities numbered 26,185 in total. Compared to other countries, such as Australia, the total number of fatalities in Indonesia is so much higher, since the total number of fatalities in Australia in 2016 was 1,294 road deaths (Australian Government Department of Infrastructure and Regional Development, 2017). The extremely high accident rate in Indonesia indicates that the safety issue has not been taken seriously, and Indonesians have a poor awareness of safety matters. This can be seen on the roads in Indonesia where many Indonesians ride their motorcycles without wearing a helmet although this safety measure has been made compulsory by the Indonesian government.

All participants acknowledged that their respective units have a safety program in place. However, regarding a safety management system, the findings suggest that the participants’ understanding of the SMS differs. The first group of participants understood the concept of an SMS, whereas the second group were unaware of it. On the one hand, the first group of participants understood the concept as they had received formal safety education and training. On the other hand, this was not the case with the second group of the participants. As a result, the second group were unfamiliar with the notion of an SMS. As previously, the successful implementation of the SMS is significantly influenced by the understanding of each member in implementing it. So, it is argued that the personnel’s poor understanding of the SMS is another factor that prevents the successful implementation of the SMS and the promotion of a safety culture within the military units.

6.3 Summary

Analysis of the findings demonstrates that characteristics of the military organisational culture have significantly influenced the implementation of the safety management systems and the promotion of a safety culture. Some characteristics of the military organisational culture such
as punishment and reward, blame culture, and class structure have created conditions that do not support the implementation of an SMS and the promotion of a safety culture. The conditions have resulted in the unit members being reluctant to report a problem, poor communication between lower ranks and superiors, and lack of transparency. One characteristic of the organisational culture, siap/can-do culture, is appropriate when applied to military operations. Nevertheless, a siap/can-do culture has negative outcomes when applied to safety. In addition to cultural factors, inadequate safety education and training, and different perceptions regarding safety have obstructed the implementation the SMS and the promotion of a safety culture.
CHAPTER 7
CONCLUSION AND RECOMMENDATIONS

7.1 Introduction

This thesis contributes to the literature pertaining to this research field by providing an empirical study with respect to the influence of the cultural factors, national and military organisational cultures, on military aviation safety. The study investigated the impacts of cultural factors on the adoption of safety management systems that originated from another culture. This study also makes a practical contribution by offering several recommendations. One of the objectives of this project was to identify cultural factors that possibly obstruct the implementation of the aviation safety management systems and the promotion of a safety culture in military organisations. The adoption and implementation of the SMS by the military have not yet led to positive outcomes since the organisation still experiences aircraft accidents every year. A conceptual framework for this study was constructed based on the interdependent relationships between safety management systems and safety culture proposed by Eurocontrol (2008). While it is expected that this study can contribute to the existing aviation safety culture literature, the findings of this study can be used by the military organisation to overcome its safety issue and to improve its safety performance.

7.2 Summary

This study examined the influence of cultural factors, the Indonesian national and military organisational cultures, on aviation safety, especially on the adoption and implementation of safety management systems (SMS) and the promotion of a safety culture.

For the investigation, this study employed a qualitative approach, encompassing multiple case studies. The selection of a qualitative approach for this study was based on several rationales and considerations. First, the qualitative approach offers some advantages in that it:
- is capable of disclosing the basic assumption of an organisation culture,
- is able to gain a better understanding and actual information of the contemporary situation from the participants’ perspectives,
- places more emphasis on understanding the uniqueness of each individual and context, and the complex interrelationship among all entities,
- enables researchers to acquire a deeper understanding of the doers, behaviours, sentiments and interactions for a certain period of time and space.

Second, a qualitative approach is suited to exploratory research. Third, most of the previous safety culture research employed survey questionnaires which are believed to be inadequate for the delivery of comprehensive data for an in-depth analysis of the impacts of cultural factors on military aviation safety. Fourth, a qualitative approach provides an ideal environment for a cultural study which has to be conducted in natural settings where human behaviour and events occur naturally without interventions and manipulations. An ethnography-style research was adopted to gather data. The techniques used for the collection of data included in-depth semi-structured interviews, observations, and document analysis.

In this study, four operational air units were selected as representatives of the air operational units in Indonesian military organisations. Twenty-seven personnel were carefully selected for voluntary participation in the research. This selection was based on the participants’ knowledge and experiences regarding their respective units’ safety systems. The participants came from various backgrounds in terms of qualifications (pilot, flight engineer, maintenance, radio operator, ground crew), rank (officer and non-officer), and various position levels within the units.
After all data had been gathered, data analysis commenced. In analysing the qualitative data, this thesis followed the strategies proposed by Creswell (2013), O’Connor and Gibson (2003), Hancock et al. (2006), Clarke et al. (2015), and Braun and Clarke (2006). The data analysis in this study employed thematic analysis according to Braun and Clarke (2006) and Clarke et al.’s (2015) six phases of analysis. This study also used several techniques to increase the reliability and validity of the findings such as member checking, triangulation and disconfirming evidence.

In order to answer the main research question, this study investigated the influence of Indonesian national culture on its military organisation, identified the characteristics of the Indonesian national culture that exist in its military organisations, and identified the unique characteristics of the military organisational cultures. According to the findings, Indonesian national culture has a significant influence on its military organisations. Data from the interviews and researcher observations showed that most of the characteristics of the Indonesian military organisation culture were aligned with the national culture. Moreover, much of the Indonesian national cultural values, norms, and beliefs are derived from Javanese culture. Hence, many Javanese values can be identified and observed within Indonesia’s military organisations.

Based on the findings, the characteristics of the Indonesian national culture that exist in its military organisations are: hierarchical structures, authoritarian structure, *rukun* / harmony, *unggah ungguh* /manner, and uncertainty avoidance. Although there have been many studies (Susetyo et al., 2014; Subroto et al., 2008) claiming that the Javanese have begun to lose some of their values, this study demonstrates that most of the characteristics of Javanese culture are strongly maintained and practised by the military. The findings suggest that some
Javanese values form and shape how individuals in the military organisation interact. These values not only provide guidance for individuals, but also act as a philosophy of life. Other prominent characteristics of the military organisational culture that emerged from the analysis are the notions of punishment and reward, blame culture, class structure, and *siap/can-do* culture. In addition to cultural factors, two other factors emerged from the data analysis: safety education and training, and perception of safety.

The findings advocate that some of the existing characteristics of the military organisational cultures are congruent with the management practices that are universally applied, such as Weber’s bureaucratic organisation, Likert’s system 4, and McGregor’s theory X and theory Y. Nevertheless, there are some characteristics of military organisational cultures that pertain only to the Indonesian military organisations. Table 7 below depicts the characteristics of the Indonesian military organisational culture.

Table 7. Characteristics of the Indonesian military organisational cultures

<table>
<thead>
<tr>
<th>Universally Applied</th>
<th>Particular to Indonesia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hierarchical Structure</td>
<td>Rukun/Harmony</td>
</tr>
<tr>
<td>Authoritarian Structure</td>
<td>Unggah unggu/Manner</td>
</tr>
<tr>
<td>Uncertainty Avoidance</td>
<td><em>Siap/Can-do Culture</em></td>
</tr>
<tr>
<td>Punishment and Rewards</td>
<td></td>
</tr>
<tr>
<td>Blame Culture</td>
<td></td>
</tr>
<tr>
<td>Class/Rank Structure</td>
<td></td>
</tr>
<tr>
<td>Education/Training</td>
<td></td>
</tr>
<tr>
<td>Perception of Safety</td>
<td></td>
</tr>
</tbody>
</table>

While cultural values that exist in the military are established in order to meet the military needs, there are some potential challenges when it comes to safety, especially regarding the implementation of the SMS and the promotion of a safety culture. The findings suggest that some characteristics of the Indonesian national and military organisational culture are not aligned with several principles of the SMS and safety culture. As a result, some cultural values that prevail within the military organisational become factors that obstruct the
implementation of the safety program and the promotion of a safety culture. In addition to the cultural factors, the lack of safety education and training, and the different perceptions of what constitutes safety have created a situation in which the unit personnel’s safety awareness has decreased. Nevertheless, since culture is dynamic, this study reveals that the unit personnel have started relying more on rules and procedures, in addition to religious and spiritual values, as a means of coping with uncertainty. This finding, to some extent, is not in line with the description offered by Hofstede and the GLOBE.

Based on the findings, it is reasonable to conclude that cultural factors do significantly influence safety which is portrayed in Figure 13 below.

![Figure 13. Final Framework](image)

Regarding the implementation of the SMS and the promotion of safety culture, one statement from a commanding officer summarises the effectiveness of the program.

Theoretically, it (SMS) is already very good, very logical, but the implementation of the program still need be reviewed and evaluated. I think, at the moment, the implementation of the SMS works only at the higher-command level. The program has not been manifested and delivered to the lower level as some factors such as culture and training still become obstacles. (6A)
7.3 Contribution

This thesis makes several contributions to the aviation safety culture literature, especially military aviation studies, by: (1) investigating the influence of the Indonesian national and military organisational cultures on safety practices, the implementation of safety management systems and the promotion of a safety culture. This research provides an empirical study that investigates the impacts of cultural factors on the adoption of the safety management system that are mostly based on the Western concept of management; (2) revealing the basic assumptions or beliefs that drive people to particular behaviours. The application of a qualitative approach of this study was able to provide an in-depth understanding, in which it disclosed some unique characteristics of the military organisational cultures. One of the unique characteristics of the culture is coping with uncertainty or uncertainty avoidance. It was revealed that the description of the uncertainty avoidance in this study is not aligned with the Hofstede and the GLOBE’s description; (3) having a capability to provide grounded recommendations for the Indonesian military organisations. It is expected that the recommendations can be used by the Indonesian military to enhance its existing safety systems while eliminating its safety problems.

7.4 Recommendation

Based on the findings of this study, several recommendations can be made to the Indonesian military organisations. These are as follow: first, military organisations should take cultural factors into considerations when establishing its safety systems. It is evident that cultural factors significantly influence the implementation of safety management systems and the promotion of a safety culture. Second, the military organisations are encouraged to establish a better safety reporting system which allows the unit members to report safety issues freely. The existing safety reporting systems have not accommodated the confidentiality of the reporter.
Third, the military organisations should provide forums that enables all unit members to discuss and exchange safety-related information. The military should involve non-commissioned officers, by assigning an NCO representative to attend safety meetings. Fourth, the military should provide safety training to all military personnel. It is evident that the lack of safety training has decreased individual safety awareness and created various perceptions of safety. Fifth, the military should employ more reward-based or performance appraisal incentives rather than punishment as a means of motivating its personnel to engage in safe behaviour. The findings show that punishment harms rather than motivates the unit personnel to demonstrate safe behaviours. Sixth, the military should employ different approaches for peacetime and wartime when managing organisational processes. Those approaches should not compromise the units’ combat capability and readiness.

7.5 Limitations

This study was able to identify several characteristics of the Indonesian national and military organisational cultures that can hinder the implementation of the SMS and the promotion of a safety culture. However, those cultural factors cannot be evidenced as contributory factors of the military aircraft accidents that have occurred since the influence of those cultural factors on those accidents has not been examined. The military investigates its own military aircraft incidents and accidents. When there is an accident, the military undertakes a thorough investigation to determine its cause. The findings of the investigation will be disseminated only to certain stakeholders; even most of the military members will not have access to the findings. Because the outcomes of military aircraft investigations are not publicly available, it is difficult to analyse the cause and effect of those cultural factors in terms of past military aircraft accidents. Another limitation of this study is that the result of this research cannot be generalised to other cultures since each culture will have different impacts on safety practices.
7.6 Future Research

The findings of this study demonstrate the connections between cultural factors and safety practices. Nevertheless, this study has not analysed the correlations between past military aircraft accidents and some characteristics of the Indonesian national and military cultures. Future research could consider analysing the correlation between those cultural factors and the military aircraft accidents that have occurred.

Future research may also consider conducting studies in other industries and countries regarding the influence of cultural factors on safety. Therefore, more studies and research needs to be conducted in order to verify or otherwise that cultural factors do have significant impacts on the effectiveness of safety programs.
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APPENDICES

Appendix 1. The RMIT University HREC’s Notice of Approval

Human Research Ethics Committee (HREC)
Research and Innovation office
NH&MRC Code: EC00237

Notice of Approval

Date: 4 May 2015
Project number: 19083
Project title: The influence of Indonesian national and military organizational culture on aviation safety
Risk classification: More than low risk
Chief investigator: Dr Bernard Mees

Approved: From: 4 May 2015 To: 31 March 2018

The above application has been approved by the RMIT University HREC as it meets the requirements of the National statement on ethical conduct in human research (NH&MRC, 2007).

Terms of approval:
1. Responsibilities of investigator

   It is the responsibility of the above investigator to ensure that all other investigators and staff on a project are aware of the terms of approval and to ensure that the project is conducted as approved by HREC. Approval is valid only whilst investigator holds a position at RMIT University.

2. Amendments

   Approval must be sought from HREC to amend any aspect of a project. To apply for an amendment, use the request for amendment form, which is available on the HREC website and submitted to the HREC secretary. Amendments must not be implemented without first gaining approval from HREC.
3. Adverse events

You should notify HREC immediately (within 24 hours) of any unexpected, unanticipated or unforeseen adverse events affecting the ethical acceptability of the project.

4. Annual reports

Continued approval of this project is dependent on the submission of an annual report. Annual reports must be submitted by the anniversary of approval (4 May) of the project for each full year of the project. If the project is of less than 12 months duration, then a final report only is required.

5. Final report

A final report must be provided within six months of the end of the project. HREC must be notified if the project is discontinued before the expected date of completion.

6. Monitoring

Projects may be subject to an audit or any other form of monitoring by HREC at any time.

7. Retention and storage of data

The investigator is responsible for the storage and retention of original data pertaining to a project for a minimum period of five years.

8. Special conditions of approval

Nil.

In any future correspondence please quote the project number and project title above.

A/Prof Barbara Polus Chairperson
RMIT HREC

cc: Dr Peter Burke (Ethics Officer/HREC secretary), Mr Medi Rachman (student researcher).
Appendix 2. Research Invitation Letter

INVITATION LETTER

Project Title: The Influence of Indonesian National and Military Organisational Culture on Aviation Safety

Investigators:

Dr Bernard Mees (First Supervisor, Senior Lecturer)
School of Management

Dr Simon Fry (Second Supervisor, Lecturer)
School of Management

Medi Rachman (PhD Candidate)
School of Management

Dear Sir,

My name is Medi Rachman, and I am a PhD student at RMIT University, Australia. I am conducting a research study as part of the requirements for a Doctor of Philosophy (Management) degree, and I cordially invite you to participate in a research project entitled The Influence of Indonesian National and Military Organisational Culture on Aviation Safety.

The purpose of this research project is to investigate the influence of the Indonesian cultural factors on the implementation of the Aviation Safety Management System (ASMS), which is ultimately based on Western conceptions of management. This study involves the exploration and description of the impact of Indonesian national culture and military organisational culture on safety. Should you choose to participate, there will be two activities involved in this study, observation and interview.

Although there is no direct benefit from participating in this study, the findings of the study can be used as references for your organisations to formulate improvement strategies of the organisation’s safety system. Therefore, it is expected that the safety level of the Indonesian military organisation and personnel will increase.

If you have any pertinent questions about your rights as a research participant, please find the enclosed participant information and consent form.
If you require any further information, please do not hesitate to contact me. Thank you for your time, kind attention and consideration in this regard.

Yours Sincerely,

Medi Rachman
PhD Candidate
School of Management
RMIT University
City Campus, Melbourne VIC 3001, Australia
Dear Participants,

You are invited to participate in a research project being conducted by Medi Rachman from RMIT University, Australia. This information sheet describes the project in straightforward language, or 'plain English'. Please read this sheet carefully and be confident that you understand its contents before deciding whether to participate. If you have any query about the project, please ask the investigators.

Who is involved in this research project? Why is it being conducted?

The aim of this project is to investigate the influence of Indonesian national and military organisational culture on aviation safety. Military personnel from the Indonesian Air Force are expected to be involved in this research.

This research is being conducted in conjunction with the study of Medi Rachman for a Doctor of Philosophy (Management) degree. Medi Rachman is a PhD student enrolled in the School of Management at RMIT University, Melbourne. The research is under the supervision of Dr Bernard Mees and Dr Simon Fry from the School of Management, College of Business, RMIT University. The project has been approved by the RMIT Business College Human Ethics Advisory Network (BCHEAN). It adheres to the strict guidelines set by the Ethics Committee.
at RMIT University. This project is being undertaken as part of the requirements for the degree of Doctor of Philosophy in Management, College of Business, RMIT University.

Why have you been approached?

You have been approached to participate in this study because of your knowledge and experience in the field of aviation safety systems in your organisation. It is expected that your participation will provide us with insight and understanding of the processes and activities of your organisation’s safety systems in relation to culture.

What is the project about? What are the questions being addressed?

Although the Indonesian Air Force has had a continuous safety program and implemented safety management systems (SMSs) in order to improve the existing safety programs, the organisation is still experiencing an unpleasant situation in which aircraft accidents keep occurring. This research attempts to examine the influence of cultural factors, including Indonesian national culture and military organisational culture, on safety particularly regarding the adoption and implementation of the SMS, which is predominantly based on Western concepts of management. The influence of national culture on its military organisation, perception and behaviour of the military members, and how managers manage the organisation will be investigated and identified in order to disclose the effect of national and military organisational culture on the generation and promotion of safety.

If I agree to participate, what will I be required to?

Your voluntary participation in this research is kindly requested. There will be two activities involved in this study, observation and interview. The purpose of the observation is to explore how a unit’s members perform their daily routines and how they deal with safety issues. The researcher will be conducting observations five days a week (Monday to Friday), during working hours, over a one to three-week period. The researcher will conduct the observation from the start of the working day (7 AM) until the close of business hours (15:30 PM). The researcher will be following and observing those agreed to participate. Moreover, the observation of participants will also be done from a distance. The researcher will ask participants questions if there is any uncertainty. Each interview will last approximately 45 minutes to 1 hour at a place and time that is convenient for you and it will be recorded if circumstances permit. Both observation and interview will be conducted with your consent in order to ensure the accuracy of the transcriptions.

What is the possible risk or disadvantage?

There is no perceived risk associated with participation outside the participants’ normal daily activities. It is expected that your responses will contribute to a better understanding of the relationship between cultural factors, national and military organisational cultures, and safety. The findings of this project will be presented in thesis format available from the RMIT
Research Repository, which is publicly assessable online and may also appear in conference and journal articles.

What are the benefits associated with the participation?

This research will provide indirect benefits to participants. However, the findings of the study can be used as references for your organizations to formulate improvement strategies for the organisation’s safety system. Therefore, it is expected that the safety level of the Indonesian military organisation and personnel will increase. The results of this research will be provided to participants at the end of the project upon request.

What will happen to the information I provide?

Your privacy and confidentiality will be strictly maintained in such a manner that you will not be identified in the thesis report or in any publication, i.e. I will refer to you and your work unit by means of a code. Any information that you provide can be disclosed only if (1) it is to protect you or others from harm, or (2) if it is specifically required or allowed by law, or (3) if you provide the researchers with written permission. Interview data will be seen only by supervisors who will also protect you from risk.

Data collected will be transcribed and translated into English. To ensure that data collected is protected, all soft data will be stored on a password-protected computer in the researcher’s personal computer and the researcher's computer in the RMIT office. All hard data will be kept in a locked filing cabinet. Moreover, the data will be retained for five years upon completion of the project. After that, all hard data (paper records and any other documents) will be shredded and placed in a security recycle bin while soft data or electronic data will be destroyed by deleting them in a secure manner. Only the researchers will have access to the data, and confidentiality will be maintained at every stage.

What are my rights as a participant?

As a participant, you have the following rights:

- The right to withdraw from participation at any time;
- The right to request that any recording cease;
- The right to have any unprocessed data withdrawn and destroyed, provided it can be reliably identified, and provided that so doing does not increase the risk for the participant and;
- The right to have any questions answered at any time.

Whom should I contact if I have any questions?

If you have any questions regarding this research project, please do not hesitate to contact me. You may also contact my supervisors Dr Bernard Mees and Dr Simon Fry.
What other issues should I be aware of before deciding whether to participate?
There are no other issues that you should be aware of as participant.

If you have any concerns about your participation in this project, which you do not wish to discuss with the researchers, then you can contact the Ethics Officer, Research Integrity, Governance and Systems, RMIT University, GPO Box 2476V VIC 3001. Tel: 0399252251 or email human.ethics@rmit.edu.au

Thank you very much for your contribution to this research.
The Influence of Indonesian National and Military Organisational Culture 
On Aviation Safety

CONSENT FORM

1. I have had the project explained to me, and I have read the information sheet.

2. I agree to participate in the research project as described.

3. I agree:
   - to be interviewed and observed, and
   - that my voice will be audio recorded.

4. I acknowledge that:
   
   (a) I understand that my participation is voluntary and that I am free to withdraw from the project at any time and to withdraw any unprocessed data previously supplied (unless follow-up is needed for safety).
   
   (b) The project is for the purpose of research. It may not be of direct benefit to me.
   
   (c) The privacy of the personal information I provide will be safeguarded and only disclosed where I have consented to the disclosure or as required by law.
   
   (d) The security of the research data will be protected during and after completion of the study. The data collected during the study may be published, and a report of the project outcomes will be available in thesis format and be provided to me as requested. Any information that will identify me will not be used.

Participant’s Consent

Participant: ___________________________ Date: ______________________
(Signature)

Participants should be given a photocopy of this PICF after it has been signed.
Appendix 4. Interview Protocol

SEMI-STRUCTURED INTERVIEW PROTOCOL

Project Title: THE INFLUENCE OF INDONESIAN NATIONAL AND MILITARY ORGANIZATIONAL CULTURE ON AVIATION SAFETY

Investigators:
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Introduction

You have been invited to speak with us today because you have been identified as someone who has knowledge and experience in the field of aviation safety system in your organisation. Our study focus is on the influence of cultural factors, including Indonesian national culture and military organisational culture on safety, particularly in the adoption and implementation of the SMS, which is predominantly based on Western concepts of management. The influence of national culture on its military organisation, perception and behaviour of the military members, and how managers manage the organisation will be investigated and identified in order to disclose the effect of national and organisational culture in generating and promoting safety.

It is not a purpose of the interview to discuss any particular accident that has occurred. I don’t want you to talk about any accidents that have occurred.

Remember that if you feel uncomfortable at any stage during the interview, you can stop at any time. You can decide to stop the interview at any time if you don’t wish to continue.

A sample of Interview Questions:

Participant’s background. Would you introduce yourself: your name, rank, qualifications, length of service, and position?

What is the Indonesian national and military organizational culture and relationship between them?
  - Can you briefly explain Indonesian national culture?
  - Can you describe your military organizational culture in your own words?
  - How do you define Indonesian national culture in your military organizational culture?
  - In your opinion, what aspects or characteristics that make Indonesian national culture are unique?
- Do you believe those characteristics of Indonesian national culture are embedded in your military organizational culture? Or is there any of your military organizational culture that is different from your national culture? Can you explain it?
- Do you see any influence of globalisation on the Indonesian national culture and your military organizational culture?

What are the perceptions of the military personnel in regard to safety?
- Do you think safety is a critical factor in your day-to-day activities?
- In your own words, can you briefly define safety, SMS and safety culture?
- Do you think all personnel in your organization have the same perception in regard to safety, SMS, and safety culture? Can you explain it?
- What are the critical factors of the SMS in your organizations?
- Why do you think those factors are critical?
- What is the relationship between safety culture and SMS?
- How do you describe the existing SMS in your organization? Do you think SMS is important? Why or why not?
- Does your organization pay attention to safety as much as other aspects of business such as operations and logistics? Can you explain it?

What are the military organizational culture issues in promoting safety culture and how do these issues influence the organizational safety culture?
- Do you believe that your organization has a good system of communication with regard to safety? Would you elaborate on that?
- How often does the organization convey safety-related information to its personnel? How does the organization disseminate the information? Will all the personnel be well informed?
- How do you report any potential hazard?
- How does your organization deal with such hazard report?
- With respect to safety initiative, should you wait for an order from the higher chain of command? Can you initiate activity that involves risk and safety without your superior’s approval?
- How is your organizational structure in regard to safety?
- Does the organization take any safety-related information seriously? Can you explain it?
- In your opinion, what aspects of your military organizational culture lead to success in generating and promoting a safety culture?
- Conversely, what aspects of your military organizational culture hinder the promotion of safety culture?
- What are the challenges that your organization faces in generating and promoting a safety culture?
- What suggestion would you make to improve the safety culture in your organization?