

KAPT RABI'ATUL 'ADAWIYAH BINTI MD ZAIN MBA 2021

**THE EFFECTIVENESS OF LOGISTIC
CAPABILITY MAINTENANCE
THROUGH THE INTEGRATION OF
SUPPLY CHAIN IN MK PMBTD**

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MD ZAIN**

**MASTER OF BUSINESS
ADMINISTRATION
(SUPPLY CHAIN & LOGISTICS)**

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**THE EFFECTIVENESS OF LOGISTIC CAPABILITY MAINTENANCE
THROUGH THE INTEGRATION OF SUPPLY CHAIN IN MK PMBTD**

KAPT RABI'ATUL 'ADAWIYAH BINTI MD ZAIN

Final project paper submitted to National Defence University of Malaysia in fulfilment of the requirements for the Master of Business Administration (Supply Chain and Logistics)

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ABSTRACT

The Markas Pemerintahan Medan Barat Tentera Darat (MK PMBTD) is one of the main government organizations of the Malaysian Army based at Sungai Besi Camp, Kuala Lumpur. Prior to 2015, this formation was better known as the Markas Pemerintahan Medan Barat. MK PMBTD is responsible for implementing the repair and maintenance of Malaysian Army vehicles. Repair and maintenance of vehicle is carried out in several Repair. These duties and responsibilities are taken up by all MK PMBTD who are stationed in various formations and units. Vehicle repair and maintenance and servicing is the responsibility of the User from their respecting units. So, the maintenance responsibility in the unit is a very important because this is where maintenance or servicing at the level being carried out by the user. Hence, failure to carry out the maintenance and servicing by the respective units should be resolved promptly as failure in the implementation will result in more serious damage for the Army's vehicle. The objective of this study is, to investigate the level of Working Culture, Attitude, Leadership, Customer Relationship and Effectiveness of Logistic Capability Maintenance, to investigate the relationship between Working Culture, Attitude, Leadership, Customer Relationship and Effectiveness Logistic Capability Maintenance and to investigate the most significance of Working Culture, Attitude, Leadership, Customer Relationship and Effectiveness Logistic Capability Maintenance. The scope of this research study is performed on a total of 140 personnel in MK PMBTD and focus on Effectiveness Logistic Capability Maintenance at workplace among personnel of MK PMBTD. Quantitative research methods were conducted using questionnaires with 140 respondents from the Malaysian Army in MK PMBTD and analyzing using the Statistical Packages for the Social Sciences 26.0. The results for this study of the Working Culture and Effectiveness Logistic Capability Maintenance ($r = 0.819$), Attitude and Effectiveness Logistic Capability Maintenance ($r = 0.823$), Leadership and Effectiveness Logistic Capability Maintenance ($r = 0.882$), Customer Relationship and Effectiveness Logistic Capability Maintenance ($r = 0.819$). Then, Leadership standard coefficient Beta demonstrates the highest value 0.291 and the lowest level is Customer Relationship which is 0.35. However, the influence of these factors is found to be different from one another. Leadership shows the highest impact on Effectiveness Logistic Capability Maintenance while Customer Relationship shows the least impact on Effectiveness Logistic Capability Maintenance.

Keywords: Working Culture, Attitude, Leadership, Customer Relationship and Effectiveness of Logistic Capability Maintenance

ABSTRAK

Markas Pemerintahan Medan Barat Tentera Darat (MK PMBTD) adalah salah satu organisasi pemerintah utama Tentera Darat Malaysia yang berpusat di Kem Sungai Besi, Kuala Lumpur. Sebelum tahun 2015, formasi ini lebih dikenal sebagai Pemerintahan Markas Medan Barat. MK PMBTD bertanggungjawab melaksanakan pembaikan dan penyelenggaraan kenderaan Tentera Darat Malaysia. Pembaikan dan penyelenggaraan kenderaan dilakukan dalam beberapa Pembaikan. Tugas dan tanggungjawab ini dipikul oleh semua MK PMBTD yang ditempatkan dalam pelbagai formasi dan unit. Pembaikan dan penyelenggaraan kenderaan dan servis adalah tanggungjawab. tanggungjawab penyelenggaraan dalam unit adalah sangat penting kerana di sinilah penyelenggaraan atau servis pada tahap yang dilakukan oleh pengguna. Oleh itu, kegagalan melakukan penyelenggaraan dan servis oleh unit masing-masing harus diselesaikan segera kerana kegagalan dalam pelaksanaan akan mengakibatkan kerosakan yang lebih serius pada kenderaan Tentera Darat. Objektif kajian ini adalah, untuk mengkaji tahap Budaya Kerja, Sikap, Kepemimpinan, Hubungan Pelanggan dan Keberkesanan Penyelenggaraan Keupayaan Logistik, untuk mengkaji hubungan antara Budaya Kerja, Sikap, Kepemimpinan, Hubungan Pelanggan dengan Keberkesanan Penyelenggaraan Keupayaan Logistik dan untuk menyiasat faktor yang paling mempengaruhi dalam Budaya Kerja, Sikap, Kepemimpinan, Hubungan Pelanggan dan Keberkesanan Penyelenggaraan Keupayaan Logistik. Skop kajian penyelidikan ini dilakukan pada 140 personel MK PMBTD dan memberi tumpuan kepada Keberkesanan Penyelenggaraan Keupayaan Logistik di tempat kerja di kalangan personel MK PMBTD. Kaedah penyelidikan kuantitatif dilakukan dengan menggunakan soal selidik dengan 140 responden dari Tentera Darat Malaysia di MK PMBTD dan menganalisis menggunakan *Statistical Package for the Social Sciences* 26.0. Hasil kajian ini mendapati Budaya Kerja dan Keberkesanan Penyelenggaraan Keupayaan Logistik ($r = 0.819$), Sikap dan Keberkesanan Penyelenggaraan Keupayaan Logistik ($r = 0.823$), Kepemimpinan dan Keberkesanan Penyelenggaraan Keupayaan Logistik ($r = 0.882$), Hubungan Pelanggan dan Keberkesanan Penyelenggaraan Keupayaan Logistik ($r = 0.819$). Kemudian, pekali Beta standard Kepemimpinan menunjukkan nilai tertinggi 0.291 dan tahap terendah adalah adalah Hubungan Pelanggan iaitu 0.035. Walau bagaimanapun, pengaruh faktor-faktor ini didapati berbeza antara satu sama lain. Kepemimpinan menunjukkan kesan paling tinggi terhadap Keberkesanan Penyelenggaraan Keupayaan Logistik manakala Hubungan Pelanggan menunjukkan kesan paling sedikit terhadap Keberkesanan Penyelenggaraan Keupayaan Logistik.

Kata kunci: Budaya Kerja, Sikap, Kepemimpinan, Hubungan Pelanggan dan Keberkesanan Penyelenggaraan Keupayaan Logistik

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This final project paper titled, “**The Effectiveness of Logistic Capability Maintenance Through the Integration of Supply Chain in MK PMBTD**” produced by **Kapt Rabi’atul ‘Adawiyah binti Md Zain** Matric No **3201317** has been accepted as having fulfilled the partial requirements for the Master of Business Administration (Supply Chain and Logistics).

.....
(Signature of Supervisor)
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DECLARATION

I have read and understood the rules on cheating, plagiarism and appropriate referencing as outlined in my handbook and I declare that the work contained in this paper is my own, unless otherwise acknowledged. No substantial part of the work submitted here has also been submitted by me in other assessments for this or previous degree courses, and I acknowledge that if this has been done an appropriate reduction in the mark I might otherwise have received will be made.

Signed candidate:

You are required to justify your submitted Project Paper against the degree definition for which you are registered.

Project definition for my degree:

The project should normally be related to supply chain and logistics environment. It could address many different aspects such as business, administration and management issues. My project relates to this definition in the following way:

1. The project is centred on **SUPPLY CHAIN AND LOGISTICS SUPPORT**.
2. This project addresses the aspect of **THE EFFECTIVENESS OF LOGISTIC CAPABILITY MAINTENANCE THROUGH THE INTEGRATION OF SUPPLY CHAIN IN MK PMBTD**.
3. The intention of the project is to assist **MK PMBTD**
4. The recommended improvements in this project are based on **CONCLUSION AND RECOMMENDATION STATED IN CHAPTER 5 OF THIS PROJECT PAPER**.

The above shows the relevance of the work to the degree for which it is submitted.

	Signed	Agree (√)	Disagree (√)
Supervisor: Puan Nurhana binti Mohamad Rafiuddin			

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LIST OF ABBREVIATIONS

CRM	-	Customer Relationship Management
Div	-	Divisyen
MAF	-	Malaysian Armed Forces
MK PMBTD	-	Markas Pemerintahan Medan Barat Tentera Darat
SC	-	Supply Chain
SCM	-	Supply Chain Management
SFS	-	Situational Force Scoring

CHAPTER 1

INTRODUCTION

1.1 Introduction

In this chapter, the background of study is presented, followed by problem statement of the study, the research question, the research objective, conceptual framework, scope of the study, Significant of the study and operational definition of term on this study. The chapter concludes with the organization of the thesis for thesis of the effectiveness of logistic capability maintenance through the integration of supply chain in MK PMBTD.

1.2 Background of study

The Markas Pemerintahan Medan Barat Tentera Darat (MK PMBTD) is one of the main government organizations of the Malaysian Army based at Sungai Besi Camp, Kuala Lumpur. Prior to 2015, this formation was better known as the *Markas Pemerintahan Medan Barat*. (BTDM, 2021)

This *Markas Pemerintahan Medan Barat* has three main Div, namely the 2nd Infantry Division (2 Div) at Tun Razak Camp Penang (controlling the northern and east coast of Peninsular Malaysia), the 3rd Infantry Division (3 Div) at the Sungai Udang Melaka Camp (controlling the territory south of the Peninsula) and the 4th Infantry Division (4 Div) at Wardieburn Camp Kuala Lumpur (controlling the central region of the Peninsula). The *Markas Pemerintahan Medan Barat* of this headquarters is known as the Commander of the West Field (three-star general). As a dynamic organization, the MK PMBTD has grown rapidly in coordinating and implementing operational activities as well as training troops under its administration. (BTDM, 2021)

The history of the establishment of the MK PMBTD began on 5 May 1981 when the *Markas Kor Tentera Darat* was established as a follow-up step to the development and structuring of the Army to take on the responsibility of governing, controlling and managing all *Formasi Medan* in Peninsular Malaysia. For *Formasi Medan* in Sabah and Sarawak, the operating status at that time was still placed under the rule of the Infantry First Division Headquarters which was directly responsible to the Commander of Malaysian Army. (BTDM, 2021)

After the establishment of the Markas Kor Tentera Darat, it has shared residences, office buildings and certain facilities belonging to the Two Division Headquarters at the *Markas Dua Divisyen di Kompleks Markas Dua Divisyen, Pangkalan Sungai Besi*. The function of

MK PMBTD is to carry out base overhaul (complete strip and rebuild) of military vehicle and equipment. Base overhaul, also known as refurbishment, involves the repair of all components and accessories of the vehicle and equipment. The responsibility of this organization is to refurbish all armored vehicles (tanks, armored personnel carriers and armored fighting vehicles), light combat vehicles (Jeeps, Land Rover and three tonner trucks), mortars and artillery long-range guns, small arms, radars and electronic devices used by the Malaysian Army.

For the MK PMBTD, the effectiveness of Logistic Capability Maintenance through the Integration of Supply Chain of A supply chain is a complex network of entities that perform several interrelated and depending tasks to produce and deliver products or services to the market. This involves, but not limited to, activities of; sourcing, purchasing, storage, production, transportation, delivery, maintenance and repair. A reliable and efficient process of coordination along the jobs and tasks executed by each participant is a key element to achieve efficiency and effectiveness of a supply chain and thus develop and sustain business operational performance.

Highest level of coordination among Effectiveness Logistic Capability Maintenance participants is obtained through the existence of a seamless supply chain integration a concept that recognizes an efficient control and management of critical flows of material and information throughout all Effectiveness Logistic Capability Maintenance nodes, i.e.

the participants, from the main suppliers until the end-customer, which require the establishment of collaboration and cooperation to develop an active process of communication, wherein critical information and data is shared, and also an effective coordination of operational activities related to the provision of services the Effectiveness Logistic Capability Maintenance.

In line with its role defending the country sovereignty, the Malaysian Army has set the percentage of combat readiness to stay at 80% level in a certain number. This is to ensure that Malaysian Army is ready for deployment if situation warrants it. The MK PMBTD are responsible for ensuring the percentage of Army's vehicle serviceability always at the highest level. This is to ensure that the vehicle ready to be mobilized. In this regard, Malaysian Army has set the vehicle's percentage of serviceability in Situational Force Scoring (SFS) to reach 80% at any time. MK PMBTD is responsible for vehicle maintenance, repair and servicing, MK PMBTD also has a role to play in co-responsibility with other logistics corps which to ensure SFS's achievement target is always met.

1.3 Problem statement

MK PMBTD is responsible for implementing the repair and maintenance of Malaysian Army vehicles. Repair and maintenance of vehicle is carried out in several Repair. These duties and responsibilities are taken up by all MK PMBTD who are stationed in various formations and units. Vehicle repair and maintenance and servicing is the responsibility of the User from their respecting units. So, the maintenance responsibility in the unit is a very important because this is where maintenance or servicing at the level being carried out by the user. Hence, failure to carry out the maintenance and servicing by the respective units should be resolved promptly as failure in the implementation will result in more serious damage for the Army's vehicle.

Vehicle repair, maintenance and servicing is the responsibility of the personnel from their respecting units (Virca, et al 2015). This repair, maintenance and servicing including of the Malaysian Army vehicles also. So, the maintenance responsibility in the unit is a very important because this is where maintenance or servicing at the lower level being carried out by the units themselves.

Casualty that cannot be repaired at Malaysian Army vehicles will be push forward and sent to various Workshops for further repairs. That casualty is brought to the Malaysian Army vehicles due to the absence of equipment, lack of expertise or absence of spare parts. Most

of the reasons for vehicle unserviceability that has been identified is due to failure to perform maintenance and servicing by personnel.

The failure to carry out the Malaysian Army vehicles maintenance has led to serious damage to the vehicle. Failure is either due to negligence or misuses, no such enforcement may lead to serious damage to the vehicle whether damage to gear boxes, radiators, engines and others. Damage due to failure to performed immediate repairs can lead to serious damage to the system as a whole such as transmission systems, cooling systems, engine systems and electronic systems. Hence, failure to carry out the maintenance and servicing by the respective units should be resolved promptly as failure in the implementation will result in more serious damage for the vehicle (Husniah, et al 2016).

According to Ahdar (2010), the study on the improving the effectiveness of the repair of scorpion tank at 91 Armed Forces central workshop, this study shows that there is a growing discontent by higher authorities that in the previous years, 91 AFCW failed to deliver products in term of the required quantity and quality, particularly for the repair of Scorpion Tank. The average cost per vehicle for the repair of Scorpion is high. The higher authority in the Ministry of Defense believe that there is a need to improve the performance and reduce the repair cost and a comprehensive is to be conducted immediately.

1.4 Research Objective

There are two types of objectives to be achieved in this research. These two types of objectives were set directly to the main target of study and collect the accurate findings.

1.4.1 General Objective

To identify the factor that affecting the Effectiveness on the Logistic Capability Maintenance for this study.

1.4.2 Specific Objectives

1. To investigate the level of Working Culture, Attitude, Leadership, Customer Relationship and Effectiveness of Logistic Capability Maintenance
2. To examine the relationship between Working Culture, Attitude, Leadership, Customer Relationship and Effectiveness Logistic Capability Maintenance
3. To determine the most significance of Working Culture, Attitude, Leadership, Customer Relationship towards the Effectiveness Logistic Capability Maintenance