

The Effectiveness of Logistic Capability Maintenance Through the Integration of Supply Chain in MK PMBTD

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Abstract: 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 to determine the level of working culture, attitude, leadership, customer relationship and effectiveness of logistic capability maintenance, to examine the relationship between working culture, attitude, leadership, customer relationship with the effectiveness logistic capability maintenance and to examine 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 of the correlational research design were conducted using questionnaires distributed to the 140 respondents from the Malaysian Army in MK PMBTD and analysing 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 0.035. 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 logistic capability maintenance

1. Introduction

The MarkasPemerintahan Medan Barat TenteraDarat (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 MarkasPemerintahan Medan Barat. 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.

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 [15][25]. 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 [8].

Vehicle repair, maintenance and servicing is the responsibility of the personnel from their respecting units [7]. 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 [21] [25] [31] [32].

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 [18]. 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 first objective is to determine the level of working culture, attitude, leadership, customer relationship and effectiveness of logistic capability maintenance, then the second objective is to examine the relationship between working culture, attitude, leadership, customer relationship and effectiveness logistic capability maintenance and then, the third objective is to examine the most significance of working culture, attitude, leadership, customer relationship towards the effectiveness logistic capability maintenance.

2. Literature Review

2.1 Work culture

A work culture in maintenance that encompasses the way of life in the organization is seen to be able to bring about change. Work culture involves the enthusiasm, attitude, and level of productivity of employees demonstrated by employees. Therefore, to resolve the problems arises, the operating culture of maintenance got to be enforced by the organization to extend the standard of maintenance work [22][30]. This is often to market continuous information and talent improvement, and performance improvement in maintenance activities.

Therefore, the work culture that the leader highlights will be identified so that it is in line with the needs of the organization. Indeed, this organizational culture is necessary to lead to improved quality of work [11]. Work culture is very important in youth work to enhance professionalism. A work culture is a way of working that is based on a value system held by every officer and staff in the organization. A work culture that emphasizes the aspects of openness, guidance and support is the driving force to the success of an organization. The way of working is a tradition and values held by the organization. [30]. The values that are practiced or lived in an organization are known as work culture. If the values practiced are good then the work culture produces good work. Therefore, it is important that the elements of work culture and professionalism are given serious attention by work practitioners in Malaysia to ensure that all development and maintenance efforts are achieved. This is as a result of, they're not tuned in to the requirements of operating work culture of maintenance to be enforced within the upkeep activities [4].

The success of the implementation of safety programs in the maintenance is determined by the statistics of the number of accidents or injuries that occur in an organization. The increase in accident and injury rates can reflect the strengths or weaknesses of the safety work culture that is the practice of the organization. The fact is, work culture is a major factor leading to accidents and injuries in the workplace [11].

H1: There is a relationship between working culture with the effectiveness logistic capability maintenance

2.2 Attitude

Every employee in an organization whether individual or group is the backbone to the rise and fall of an organization. It is the responsibility of every employee whether individually or in a work team to perform the task at hand and lead to the achievement of the goals of an organization[21][25]. The success of an organization depends on the excellence demonstrated by the employees according to their attitudes.

Attitudes and values are a series of actions of employees in an organization that influence each other. An individual's attitude will be influenced by the value of a job done and accept it positively or negatively. Their evaluation of the job they want to do is either positive or negative will determine the level of job satisfaction they experience and will then influence the actions they take from the job satisfaction or dissatisfaction they do [6]. Attitudes play an important role because in a work team each member needs each other to achieve the set objectives. The higher the comfort of an employee doing the work, the higher the commitment that will be given

by him and lead to the improvement of the work performance shown by the individual. Thus, every employee should have a positive aspect that is able to contribute to the maintenance activities and processes in the organization in order to achieve the goals and success of the organization [8].

H2: There is a relationship between attitude with the effectiveness logistic capability maintenance.

2.3 Leadership

Leadership as an ability, capability, competence, force of action and achievement of a person as an administrator or leader. leadership as a type of behavior that aims to influence other individuals so that they are willing and willing to do what the leading individual wants. leadership as a process that influences a person to enable them to understand and agree on what to do and how to do so as to encourage their efforts and achieve the same goal in the end. [15] Leadership is a process that influences leaders and followers to achieve organizational goals and objectives through change. Then, leadership is not a characteristic that is in the leader but it is a transactional activity that takes place between the leader and the follower. Leadership also influences a group that has a common goal to achieve tasks and goals in the end[1]. Based on all definitions, leadership is generally the process of influencing individuals and groups to achieve a goal. In addition, leadership is the behavior of a leader to find solutions to problems and find ways to implement a program or task aimed at achieving organizational goals[25]. Leadership is also a life skill that is necessary for the success of an organization according to the goals that have been planned by taking into account the relevant factors.

H3: There is a relationship between leadership with the effectiveness logistic capability maintenance.

2.4 Customer Relationship

The relationship between the company's customer-centricity and certain interrelated aspects of supply chain management, including customer service and financial performance [13]. They developed and tested an integrated model in which they proposed the impact of customer focus on supply chain relationship capabilities and therefore on performance results. They collected data from more than 200 American manufacturing companies and tested the model through SEM. They significantly determined the positive relationship between customer focus and supply chain relationship capabilities, customer focus and customer service, supply chain relationship capabilities and customer service, and customer service and financial performance [33]. They recommend that supply chain partners reconfigure their supply chains to make them more customer-oriented, and continue to develop and use relationship capabilities to enhance the company's competitiveness and play a role.

H4: There is a relationship between customer relationship with the effectiveness logistic capability maintenance

2.5 Effectiveness Logistic Capability Maintenance

The logistical aspect is important because it influences the success and failure of a military operation through resource support to the armed forces. However, in ensuring the successful role of logistics support, it also depends on the ability to maintain (sustainability) logistics support in the long run. At this point, logistical support is through a joint force controlled by the MAF Headquarters in terms of planning and logistical support in MAF operations. MAF Headquarters is responsible for planning, logistical support, strategy or operational concept to the three branches of services [10]. In ensuring the success of this logistical support, MAF makes three main sources to enable logistical support to be provided through service support which is a single service resulting from a combination of three branches of services (land, sea and air). Then, civil support involves support in terms of energy and public infrastructure to the MAF to be used by the military and international support is a source of support through security agreements and cooperation between Malaysia and other countries in the military aspect [25]. Each branch of MAF services has to take on logistical responsibilities in various aspects such as procurement systems, assets, capacity development, implementation, maintenance, support equipment and other logistical requirements. [25] [26].

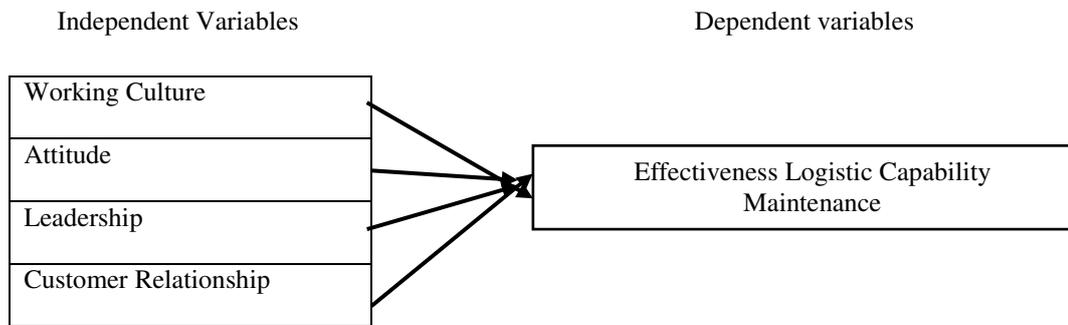


Figure 2: The relationship between working culture, attitude, leadership, customer relationship with the effectiveness logistic capability maintenance

3. Methodology

For this research methodology, the researcher uses the quantitative research method by distributing the questionnaire to the 140 personnel among MK PMBTD, Sg Besi Camp. A total of 140 questionnaires were distributed and 100% response rate feedback from the respondent. The questionnaire get from the respondent will analyses using the Statistical Packages for the Social Sciences 26.0. The descriptive analysis, correlation analysis and regression analysis method are used to analyses the data. [28]

4. Findings and Discussion

The result shows that the rank demography for Other rank is 96.4% (N=135). While, Officer shows 3.6% (N=5). Based on the data analysis information, the dominant rank of respondent was Other rank. Then, for the gender distribution, the percentage of male gender is 61.4% (N=86), and female is 38.5% (N=54). Based on the data analysis information, the dominant gender of respondent was male. Then, the percentage of Age Less than 25 years is 15.0% (N=21). While, 25 – 40 years shows 61.4% (N=86) and 41 – 55 years was 23.5% (N=33). Based on the data analysis information, the dominant Age of respondent was between 25 – 40 years. Then, the percentage of Education Level SPM /STPM is 87.9% (N=123). While, Certificate / Diploma shows 8.6% (N=12), Bachelor’s Degree was 2.8% (N=4) and Master / PhD was 0.7% (N=1). Based on the data analysis information, the dominant Education Level of respondent was SPM /STPM. In additions, the percentage of Working Experience between 1 – 5 years is 27.1% (N=38). While, 6 – 10 years shows 39.2% (N=55), 11 – 15 years was 22.1% (N=31) and more than 15 years was 11.4% (N=16). Based on the data analysis information, the dominant Working Experience of respondent between 6 – 10 years as shown in the table 1.

Table 1: Respondent profile

Characteristic	Frequency	Percent
Rank		
Officer	5	3.6
Other Rank	135	96.4
Gender		
Male	86	61.4
Female	54	38.5
Age		
Less than 25 years	21	15
25 – 40 years	86	72.1
41 – 55 years	33	23.5
56 years and above	0	0
Education Level		
SPM /STPM	123	87.9
Certificate / Diploma	12	8.6
Bachelors Degree	4	2.8
Master / PhD	1	0.7
Working Experience		
1 – 5 years	38	27.1
6 – 10 years	55	39.2
11 – 15 years	31	22.1
More than 15 years	16	11.4
Total	140	100.0

To determines the relationship of the Working Culture, Attitude, Leadership, Customer Relationship and Effectiveness of Logistic Capability Maintenance. As the correlation coefficients shown in Table 2, Working Culture ($r=0.819$), Attitude ($r=0.823$), Leadership ($r=0.882$) and Customer Relationship ($r=0.819$). The results show that all hypotheses is supported.

Table 2: Correlations Analysis

Variables		Y	X ₁	X ₂	X ₃	X ₄
Y	Effectiveness of Logistic Capability Maintenance	1				
X ₁	Working Culture	0.819**	1			
X ₂	Attitude	0.823**		1		
X ₃	Leadership	0.882**			1	
X ₄	Customer Relationship	0.819**				1

** Correlation become significant at the 0.01 level; Bonferroni adjusted alpha (α adjusted) = 0.0125 (0.05/4).

The R-squared value of 0.790 explained that 79.0% of the variance in the Effectiveness of Logistic Capability Maintenance. The results obtained are satisfactory. F-statistics shows that [F (4, 136) = 67.264] and ($p = 0.001$). Leadership $\beta=0.291$ is the highest t-statistic of 6.491 and these variables have a contribution in Effectiveness of Logistic Capability Maintenance. Working Culture is $\beta=0.274$, Attitude was $\beta=0.196$ and Customer Relationship was $\beta=0.035$.

Table 3: Regression Analysis

Effectiveness of Logistic Capability Maintenance	B (Unstandardized Coefficient)	Std. Error	Beta (Standardized Coefficients)	T	p-value
Constant	.193	.019		2.321	.001
Working Culture	.211	.026	.274	5.236	.007
Attitude	.095	.019	.196	1.978	.001
Leadership	.244	.001	.291	6.491	.003
Customer Relationship	.078	.017	.035	2.004	.001

*Notes: $R=0.811^a$; $R^2=0.790$; $Adj. R^2=0.763$; $F(4,136) = 67.264$, $P = 0.0001$.

5. Conclusion

Working culture, attitude, leadership and customer relationship have a significant positive relationship with dependent variable effectiveness logistic capability maintenance. Leadership factors contribute the highest correlation with the effectiveness logistic capability maintenance among the soldiers involved in the operations. In conducting this research, the researcher encountered difficulty in collecting the resources related to the research where the available resources were very limited. The scarcity of resources is due to the limited number of researches related to this research, especially those involving local military operations. Hence, the researcher has searched a literature review involving level of logistics support related with other organization. In addition, the researcher has also obtained additional reference resources through printed materials such as operational military reports, books, journals and online resources. Other than that, the researcher also has the constraint pertaining to the data collection because the research data only manage to collect after the battalion is completed the operational task return to the base. All in all, this research is significant to the soldier's effectiveness logistic capability maintenance in the MK PMBTD in the context of performing operational tasks. Factors contributing to the effectiveness of logistics support elements such as working culture, attitude, leadership and customer relationship among the soldiers during conduct the operations. However, this research only focusses on MK PMBTD and not cover comprehensively in the Malaysian Army organization.

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