INTERNATIONAL JOURNAL OF ENGINEERING TECHNOLOGY AND SCIENCES (IJETS)
ISSN: 2289-697X (Print); ISSN: 2462-1269 (Online) Vol.7 (1) June 2020

DOI: http://dx.doi.org/10.15282/ijets.7.1.2020.1006

# Constructing a new cost structure using time-driven activity-based costing for replanting at palm oil plantation

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**Abstract**- The palm oil industry in Malaysia is undeniably the pride of the country. However, in this plantation there are currently few issues which do not set up a time equation to interpret the variance of activities, the rate setting did not illustrate the correlation between the resources provided and the practical capacity, and the manager had no tool in place to monitor the unused capacity. In order to increase precision in the field of palm oil plantation, this work aims to develop a new cost structure. Time-driven activity-based costing (TDABC) has been introduced because it allows time output to be efficiently assessed, the idle capacity accurately defined, and the unused capacity separately to be recorded. This provides an overview of functional tools and their associated costs as well as measurement methods and facilitates quality improvement. This work focused only on replanting field and the plantation located in Pahang. The maximum replanting capacity cost rate (CCR), with 288600 minutes and 0.106 RM / minute, was subsequently successfully developed. Finally, the manager can observe that 68358.45 minutes of utilized capacity could be used for the systematic development of replanting capacity planning.

**Indexed Terms**- Palm oil plantation, time-driven activity-based costing, capacity cost rate, time equation, traditional cost accounting.

## I. INTRODUCTION

Malaysia's palm oil industry showed an unfavourable performance compared to 2017 in 2018. Fresh fruit yields, production of crude palm oil, and exports of palm oil decreased as palm oil importations grew, while palm oil stocks closed. This occurred because of a lack of model cost models became less prevalent, as the direct labor value of goods decreased. The application of the traditional method based on one foundation such as direct working hours contributes to a less precise and economic reality. The costing methodology proposed by Cooper and Kaplan assumes that many of the products use the same activities, which require resources in different quantities [1]. Costing based on activities is an approach proposed by Cooper and Kaplan. The estimate of cost of products and services is more accurate, in particular when it consists of a section of human activities and activities in a certain center [2]. They include mapping process and identifying value-adding activities, analyzing the costs of these activities and using cost drivers that were developed [3]. This methodology offers precise system modelling in order to evaluate the organization's business processes, and its implementation is very important when the largest share of expenses is assigned to the skilled workforce [4]. ABC is a suitable methodology for understanding the costs of highly complex systems, but the method is human-oriented. TDABC, however, is a changed ABC that assigns directly the cost of resources to value entities by means of a cost level on energy. This approach is based on its fundamental principle that value drivers are converted into time calculations which are time needed for carrying out an operation [5]. [6] had speculated the potential of cost reductions that would not jeopardize clinical performance through identifying causes of price variability on three locations. [7] reported that TDABC can enable managers concentrate on value-added activities and restrict value-added activities, which is very much required in any organization and that decision-making power in the adoption of policy deviations. [8], [9] and [10]