

QUALITY MANAGEMENT PRACTICES SYSTEM IN PALM OIL SUPPLY CHAIN: THE CASE OF UPSTREAM

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ABSTRACT

Some oil palm organizations have yet developed a tool to assess quality management practices in the upstream. Upstream in oil palm supply chain include the growing sector involved in the cultivation of oil palm that include nursery establishment and production of fresh fruit bunches (FFB). Besides, oil palm industry players have raised and issued that the quality management practices are not continuously been practiced despite existing various current quality management practices implemented in palm oil industry today. This research attempts to identify the current quality management practices in palm oil upstream supply chain and ultimately develop a tool for assessing quality management practices for industry by using qualitative method. This research uses Design Science Research Methodology as a framework and used grounded theory methods for the Quality Management Practices Model (QMPPOSC). The tool consists of 2 modules and each contains 2 parts which are operation and sustainability. 2 companies (FELDA and Private Plantation Company) have been sampled to evaluate the parameters and contents of the tool. The companies that have been evaluated scored 4 and 5 stars out of 5. This research has not concluded that the Quality Management Practices Model (QMPPOSC) is the solution to the existed problem, but merely a solution. This tool is created to help the industries to evaluate their sustenance of plantation operation in quality management practices. QMPPOSC is roadmap towards quality management practices that eventually will help in generate profit in the future.

Keywords: QMPPOSC, agriculture supply chain

1.0 INTRODUCTION

Palm oil (*Elaeis guineensis*) is a crop that is efficient, multiuse and the oil is the most widely used in the world. Malaysia is the second largest in producing oil palm. As the biggest producer and exporters of oil palm and palm oil product, Malaysia has to play important roles to fulfilling the growing global need for oils and fats. As cited by (Lestari *et al*, 2013) indicate that palm oil industry has the high complexity of the business chain and these business processes are initiated from plantation, and then processed by the processing industries, distributed to industry of product developers that produce diverse products until the end user as customer. The palm oil supply chain has three levels of activities which are upstream, midstream and downstream.

In this research are only focusing on QMP in palm oil supply chain in the upstream sector. Upstream in supply chain is the crucial part of palm oil industry that includes the establishment of nursery until the transportation of FFB to the mill. The failure of existing methods to address the needs of quality assessments in some literature (St. Clair, 1997) to support industry and the private sector for new performance measurement techniques. Oil palm organization players have raised an issues claim that the quality management practices that have been implied are not continuously been practice in our oil palm industry because of lack assessment in QMP.

Lack of framework to measure a QMP in palm oil supply chain as cited by Feigenbaum, 1961; Deming, 1986; Juran, 1988) that the TQM implies that the development of a culture of quality is binary - you may have it or you don't. There are various TQM that have been implemented in palm oil industry today. Some oil palm organizations have yet developed a tool to accessing the QMP in oil palm supply chain for upstream.

This research is attempting to achieve these objectives:

- To identify current quality management practices in palm oil supply chain in the case of upstream.
- To develop a quality management practices system tool that fulfilling the need of current industry demand in oil palm.
- To evaluate the effectiveness of quality tool applied in the palm oil supply chain industry for upstream.

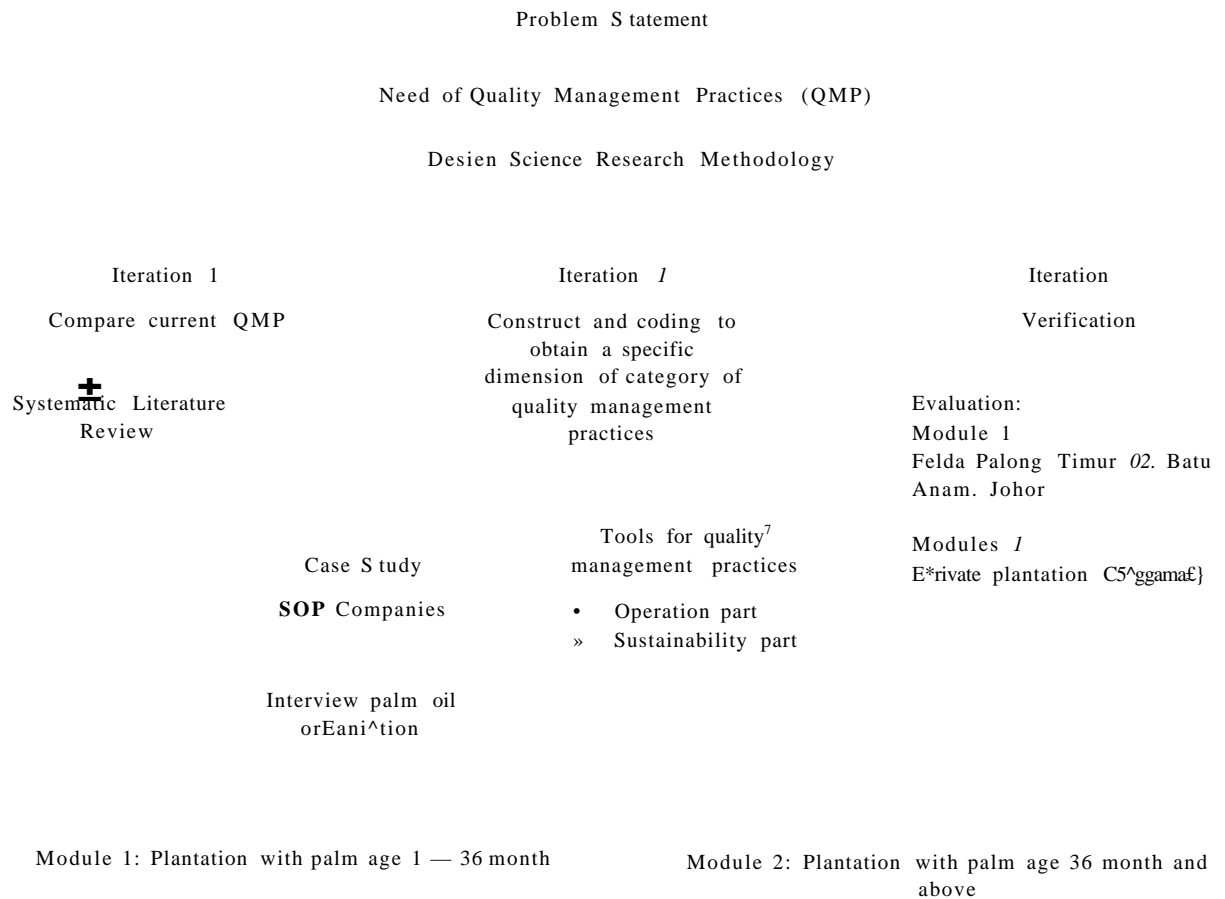
2.0 METHODOLOGY

The problem statement that had been identified has shown that there are needs of quality management practices (QMP) in oil palm industry especially for palm oil supply chain in upstream sector. This research are using Design Science Research Methodology as a framework for the method that comprise the case study of literature, case study of plantation companies document and Case

study via expert person (Grounded Theory) as the method to collecting the data.

Design Science Research Methodology Framework was divided into three main iterations. The iteration 1 is to compare the current QMP by using the systematic literature

review, case study of SOP companies and interview the expert persons; iteration 2 by using the data that had been collected from the iteration 1 researcher start to construct and coding to obtain a specific dimension of the category of the QMP which is the tools for the



QMP had been produce that consist of two main part that will be assess which are Operation and Sustainability part in QMPPOSC. The researcher has divided the QMPPOSC tool into 2 modules which the module 1 will be answer by the plantation that have palm age 1-36 month and module 2 for plantation who had palm more than 36 month and above. Iteration 3 is the verification the

tool to the real industry, which 2 companies (FELDA and Private Plantation Company) have been sampled to evaluate the parameters and contents of the tool.

Indicator

The indicator to evaluate the Quality Management Practices Model Palm Oil Supply Chain (QMPPOSC) was identified as follows:

Grade	Score (%)	Criteria
	SO -100	Compliance to all standard and the good QM in continuous and sustained
* *	60 -79	Compliance to all standard, but the good QM is not continuous and sustained
* *	40 -59	Only complied to certain standard and good QM is not continuous and sustained
● ● ●	20 -39	Noncompliance with any standard but follows certain criteria of good QM
* *	0 - 19	Noncompliance with all standard with poor conduction of good QM

3.0 RESULT

Company & Modules	Eejda Ealfibi IHHW; 02, Bafll Aaara Ssgaraai f Module 1)	Private Plantation tu SfigaiMt Johor (Module 2)
Result	0*%) * * * * *	(75%) * * * *

Based on the result shown that Felda Palong Timur 02 who answer the module 1 score 85% which mean they are in the highest level in the indicator parameter which shown that they are compliance to all standard and good in quality management in continuous and sustained.

For the private plantation who answer module 2 score 75% which mean they are

compliance to all standard but the good quality management is not continuous and sustained.

4.0 DISCUSSION

Based on the result, I can conclude that both companies lack of quality assessment on sustainability part. This is because both companies scoreless in sustainability part. As we know, oil palm plantations are moving to sustainability in their palm through the MSPO

certification. They need more improvement in term of many aspects to get the certification. In order to achieve that certification level, they need more frequent assessment so that they can be prepared for MSPO audit. They can use the QMPPOSC model to help them to assess themselves in the QMP so that they can make improvement in their plantation especially on sustainability part.

Although, both company are score high but we would like to recommend some action that need to be taken by them in order to achieve higher level and sustained the good QM in their plantation. For FELDA, they need to maintain the implied with the good QMP follow up and continuous assessment by top management. While for the private plantation, they need to implement with good supervision for QMP and improve in continuous assessment by top management.

There are also a recommendation plans in order to use this tool according to the position in the management. For example the assistant manager should do the daily assessment while for the CEO maybe they can assess to the report yearly or quarterly. But the most important thing is, the top management in oil palm organization should monitor the report of the valuation of their company so that they can make improvement from time to time and ensure it is a continuous practices.

5.0 CONCLUSION

This research has not concluded that the QMPPOSC is the solution to the problem, but merely a total solution. The QMPPOSC are

solutions to a problem where no solutions previously existed. The design science research produced a solution, improves the problem scope and addresses the problem through theory development in the qualitative paradigms. Development of tool in this research has documented features and described paths. QMPPOSC is roadmap towards quality management practices that eventually will help in generate dollars and cents.

As expected at the start of exploration in the research area, there are large areas for further research on this topic. Some of organizations may be operating below the base level of the QMPPOSC so that further research is needed into the application of the QMPPOSC.

As the QMPPOSC has only been demonstrated in two companies of palm oil plantation because of time constraint for this research there are no data on psychometric properties, such as reliability, construct validity and validity of content. The result for this research are Preliminary Result which mean in order to make the tool more reliable it must be tested from varies companies but because of time constraints it only be tested at 2 company. This research will be continuance by other students in future. Further research is necessary to demonstrate that the instrument is reliable and valid. Research is also needed into which quality improvement tools help a palm oil organization move from one level to the next in a particular practice area.

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