Warehouse Quality Management in Industry to Reduce for Production Cost using Transshipment Decisions of Marketing Management Business Control

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Abstract

This research paper presents the warehouse quality management with considered an inventory problem solving of the industry factory to reduce for production cost using transshipment decisions of marketing management business control. In Thailand are not fully aware about the impacts and value of warehouse quality management (WQM) with successful operations. To save energy using of technology, to improve performance, quality control, management components and reduce the time of work to save energy using of technology to improve performance, will occur efficiency improvement in warehouse quality control, management components and reduce the time of work. Researchers argue that effective implementation of WQM practices is a main criteria and predictor of gaining sustainability in marketing business control. The researchers examined whether the possibility of such transshipments decisions affects the optimal inventory orders at each location and find that, if each location aims to maximize its own profit, with the application of financial analysis in business management with the development of economy, enterprises are facing increasingly complex environment. Which enterprise modern management the trend. However, The researchers find transshipment marketing prices, with collect data and actual working the activities is to evaluate and summarize the results of the research. The results of this research, the purposes and goals to reduce of the production cost to energy saving is approximately to 70 % and increase energy efficiency by approximately to 80 %.

Keywords: Quality management, Warehouse, Production cost, Quality control, Marketing business

I. INTRODUCTION

The warehouse quality management of industry business in Thailand is a critical aspect of enterprise-wide optimization. Which will be able to proceed consider to inventories are used in production cost and logistics network system to coordinate supply cycles to mitigate the risk associated with uncertainty. The importance of inventory in industrial faculty applications derives from the effect of stock outs in the levels of customer satisfaction and the impact for stock out in the economic balance of companies. The study of multi-location models using transshipment decisions method is an important contribution for new mathematical inventory theory as well as for inventory practice. The accuracy of financial analysis for commercial for marketing business decision in Thailand, and the establishment of a scientific financial system promote the standardization of merchandise production quality management, to improve business efficiency and the warehouse quality of financial cost personnel. Other aspects play an important role. The idea of lateral transshipments is new. This paper is organized as follows. The next section provides a review of literature on inventory management and transshipments decisions, sets up the basic framework that allows transshipments between two locations. We can look at the classic of newsvendor problem as a special case within this framework [1]. Next section for examines how the possibility of transshipment decisions methods.

Our major contribution is to determine the load demand variations the two locations under which a transshipment policy is likely to increase performance for production cost. We give a numerical analysis in this for normal distribution and compare to the corresponding results of the classical newsvendor model and finally. Access to business financial information within a certain period of time runs through

the financial costs analysis, and accordingly develops strategic direction or to adjust the development of the business, which evaluate the present situation of enterprises [2].

II. Research Objectives

1. To study the level of knowledge employee understanding about the quality management system throughout the organization.
2. To study the opinions of employees towards the quality management system throughout the organization in terms of products and services, competitiveness, and quality of work life.
3. To study the opinions of employees towards the quality management practices throughout the organization, in terms of customer focus, continuous improvement and teamwork.
4. To save energy using of technology with improve performance, quality management control, management components and reduce the time of work.
5. To reduce for production cost using transshipment decisions of marketing management business control in Thailand.

III. Scope of Research

In the study of the content quality of the entire total quality management (TQM) organization, which the researcher needed to study the content, include background, concepts, theories and principles of the quality management system throughout the organization and especially, the importance of implementing the quality management system throughout the organization. To be used in the organization. That there are factors that promote or support the success of applying the quality management system throughout the organization or any problems that makes development or delayed acceptance, with the goal of enabling the organization to move towards excellence in the management system with the following guidelines:

1. Study the content of the Thailand Quality Award (TQA) and guidelines for receiving awards.
2. Study the guidelines for applying the quality management model for the entire organization TQM of Precise Company &International Corporation Limited.

IV. Expec ted Benefits Research

1. To know the principles and concepts of the entire total quality management system and the success factors of implementing the entire quality management system to manage.
2. To know the level management of knowledge, understanding and opinions of employees towards the implementation of the entire total quality management system (TQM) in the organization.

V. The Warehouse Quality Management For In Research

For defining quality management there is no unison. Various researchers define the concept of quality in various ways [3]. Quality Gurus defined quality and total warehouse quality management in numerous ways in every one gave various types of definition quality management in respect of industry based, service and production based is, “warehouse quality management is the conformance to requirements or specifications and requirements are based on customer needs”.

Feigenbaum denoted the ideas and views of organization wise total quality control system. And most interestingly he was the initial user of the concept of all total quality control in the literatures of quality, which total quality management (TQM) is the total composite product and good service characteristics of marketing business, engineering of industrial, manufacturing and maintenance through which the product and service in use will meet the expectations by the customer demand. The significant elements of these quality management development concepts consists commitment of total management, strategic quality system approach, measurement of warehouse quality, and improvement of product process, training and development and reducing the various symptoms and when reasons of problematic incidents. Thus, WQM always give emphasis on the customer satisfaction to ensure total quality management culture by using continuous improvement ideas concept. And between different industries, has certain essential principles which can be implemented to secure greater marketing share, increased profits, and reduced costs of production” [4].

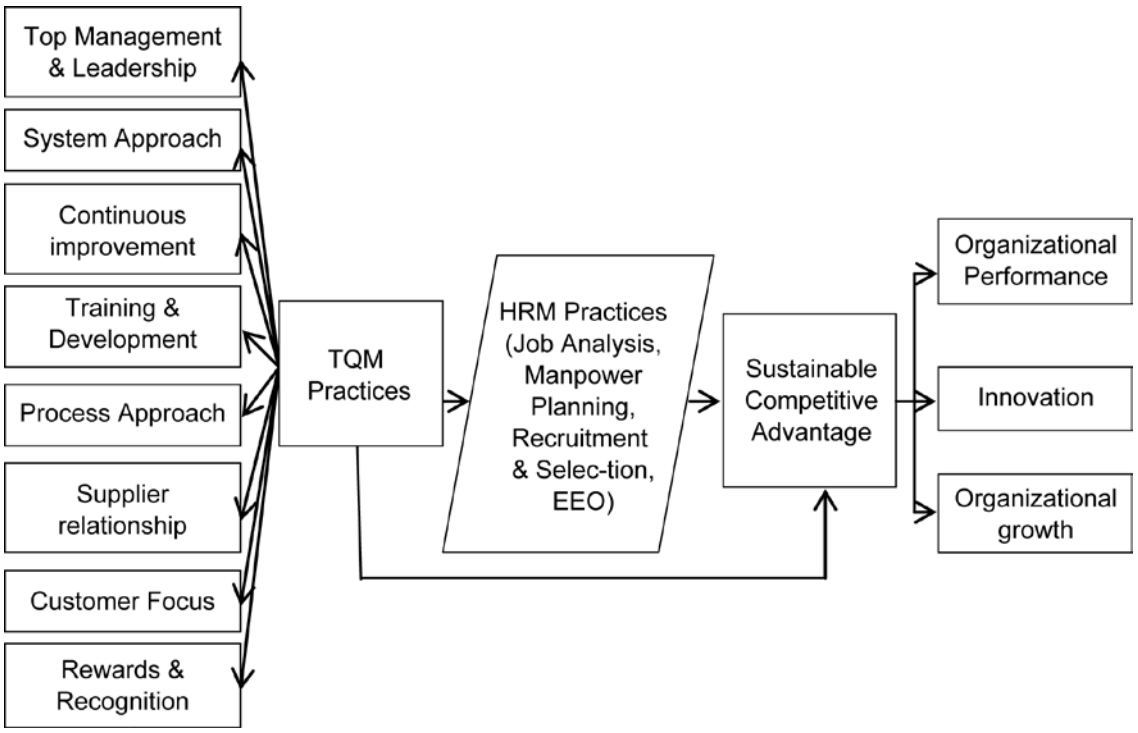

Fig. 1 Proposed research model for quality management

From as in Fig. 1 shows a human resource model for quality management practices will influence or alter the value of link among of the independent variable (IV) and the dependent variable (DV), which the IV is consists of eight TQM practices in such as leadership research model and management commitment, customer focus, process approach, warehouse quality management control, training and development, etc, which continuous improvement, supplier relationship, reward and recognition. The DV is the sustainable competitive advantage will consists of three criterions to measure. TQM defined as [5]:

- The way of managing organization to achieve excellence;
- Total: for everything;
- Quality: for degree of excellence;
- Management: for method or way of organizing, controlling, planning, direct to achieve certain goals.

A technique often used in the literature to deal with the complexity of inventory quality management and modeling under uncertainty to assume the uncertain parameter, for instance demand, is random and that probability distribution is known with certainty. In such cases, stochastic programming can be used to incorporate uncertainty into the model [6].

Fig. 2 Product quality management of the warehouse

VI. THE PRODUCTION EVALUATION FOR ECONOMIC COST

Solving the economic cost load dispatch (ELD) problem to solve an optimization problem with an objective to minimize the total production cost, an accurate short term load demand forecasting is the basis of the planning and the economic load dispatch operation of power system. Therefore, determine the reliability of the power transmission system will be based on a balance between the investment cost of construction system or improvement and a damage. Because due to power outage of business customer by appropriate design will be the all lowest overall production cost in industrial. The mutual interaction among active customers and the utility introduces a flexible profile, and thereby reduces CIC value during service interruption events [7]. The CIC load demand is the damage occurs with the relationship between annual marketing business costs and investment cost to consumer with product quality management of the warehouse as shown in Fig. 2.

VII. TRANSSHIPMENT DECISIONS FOR BUSINESS CONTROL

In the marketing business control with chain management methods of the most important components is meeting customer load demand in an effective and efficient manner. Although, there are a number of all possible solutions as shown in Fig. 3 using transshipment decisions method is among the most practical approach. Lateral transshipments within an inventory system are stock movements between locations of the same echelon [8]. There are two main streams for this research on lateral transshipment: For part 1 is to minimize the total expected production costs; lateral transshipments are arranged among all of the stocking locations before customer demands are realized, and part 2 [9], lateral transshipments decisions are made to meet unsatisfied customers when one of the stocking locations is out of stock and another has extra stock on hand.

The objective function of ELD problem can be modified as following [4].

$$\text{Minimize } G_t = \sum_{i=1}^{n} F_i(Q_i) \tag{1}$$

$$F_i(Q_i) = a_i Q_1^2 + b_i Q_2 + c_i \tag{2}$$

where G_t is the total production cost, and F_i is the fuel cost function of product *i*, and Q_i is the real quality transshipment of management *i*, when *n* is the number of electrical power generating units, and a_i, b_i, c_i are the cost coefficients value of generator *i*.

Considering the focus point effect for generators of the industry faculty, the fuel cost function of the *i*th thermal generating unit is

$$F_i(Q_i) = a_i Q_1^2 + b_i Q_2 + c_i + \left| e_i \sin\left[f_i (Q_{i,min} - Q_i) \right] \right| \tag{3}$$

where e_i and f_i are the constants from the valve-point effect of the *i*th generating units [7,9]. Subject to a power balance constraints:

$$\sum_{i=1}^{n} P_i = P_{Load} + P_{Loss} \tag{4}$$

where P_{Load} is the total real load demand at time *t*, P_{Loss} is the total transmission losses and $P_{i,\min}$ is the lower limit of real power output of the *i*th.

The traditional B matrix coefficient power loss formula is used to calculate transmission losses as shown [10]

$$P_{Loss} = \sum_{i=1}^{n}\sum_{j=1}^{n} P_i B_{ij} P_j + \sum_{i=1}^{n} B_{i0} P_i + B_{00} \quad (5)$$

where B_{ij} is element of the loss coefficient of generator for the j level value, B_{i0} is element of the loss coefficient vector and B_{00} is element of the loss coefficient cost constant [11]. The production output of each unit is bounded between to real production limits is given by

$$Q_{i,min} \le Q_i \le Q_{i,max} \quad (6)$$

where $Q_{i,max}$ is the upper limit value of real quality transshipment of management the ith.

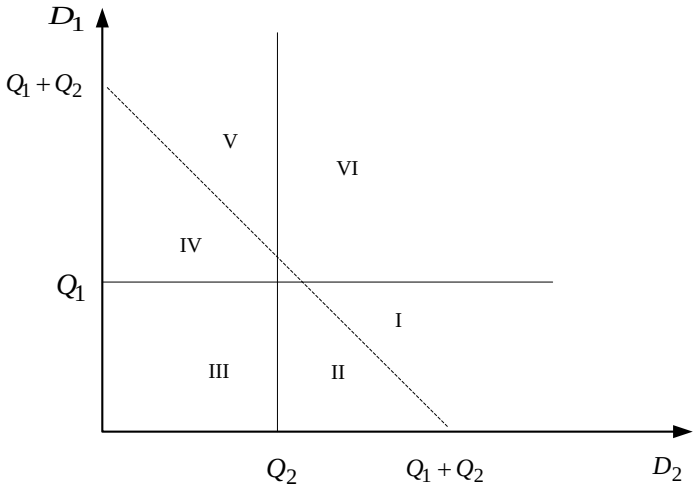

Fig. 3 The transshipment decisions of production output for each unit is bounded between to real production cost in marketing business

VIII. RESEARCH METHODOLOGY

Starting from the study is used as a guide to developing and marketing management of products with using total quality management (TQM) is the total composite product and good service characteristics of marketing business in the SMEs business to ASEAN. Researchers have defined the detail as:

1. Population and sample
2. Research tool
3. Quality testing of research instruments
4. Data collection methods
5. Steps to research methodology
6. Data analysis

A. Population and Sample

The sample groups used in the study and research were the entrepreneurs and members population of the products group in case study of Precise International Corporation Limited, in Thailand. By in-depth interviews are included in the questionnaire. The in-depth interview was conducted to gain insights into the concept is a total 10 communities and were 495 samples, include: the chairman of group, management committee, product group member. The members are responsible for the production process and finding distribution channels with selecting the specific interview or purposive sampling.

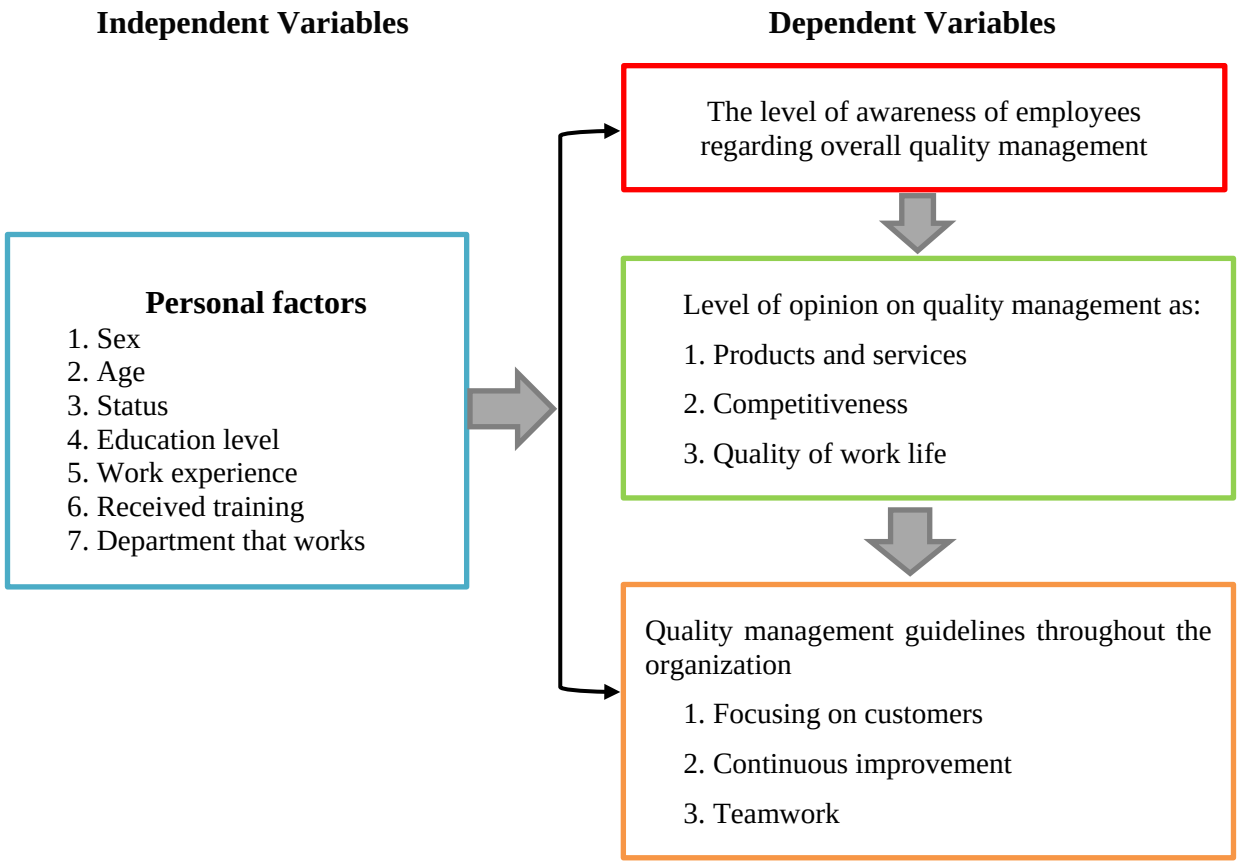

Fig. 4 The conceptual framework in research

B. Tools Used to Collect Data

For this research instrument was a questionnaire. The questionnaire was used to collect data total 495 population groups.The researcher collected data by himself and his assistant researcher. The questionnaire was returned to the respondents, with a response rate total is 100 %, and can be classified into 3 types as follows

Type 1: The questionnaire about general information of employees, such as gender, sex, age, status, education level, job age, job position and training, etc.

Type 2: The questionnaire about knowledge and understanding of employees, such as the quality management system throughout the organization with questions to choose both positive and negative.

Type 3: The questionnaire about dealing with marketing strategy development and products business management.

C. Data Collection Methods

This research is a qualitative research by using in-depth interviews. The questionnaire used in this research was set up according to the objective and conceptual framework of the research on competitive advantage with business management strategic, to testing the reliability and validity of the data for quality inspection of the tool.

1. Make a note to the responsible person of the TQM promotion department and the management of the researcher for approval to study.

2. Receive a return questionnaire and check the score according to the specified criteria in order to code, and continue to analyze statistical data.

D. Data Analysis

1. Quantitative data:

The questionnaire has been collected from the population. Make a check to rate and evaluating the data analysis using statistical package computer program for social science research (Statistical Package

for Social Science: SPSS), and analyze data to find statistical relationships. This research uses the level of confidence at 95 percent ($\alpha = 0.05$) as a criterion for accepting or rejecting hypotheses in education. The criteria for the questionnaire are as follows:

	Average		Importance level
Rating 5:	average range is	4.31 - 5.00 ->	Highest level
Rating 4:	average range is	3.51 - 4.30 ->	Very level
Rating 3:	average range is	2.46 - 3.50 ->	Medium level
Rating 2:	average range is	1.81 - 2.45 ->	Low level
Rating 1:	average range is	1.00 - 1.80 ->	Minimal level

2. Statistics used in data analysis:

The t-test is used for comparison testing. The difference between the average of independent variables That is divided into 2 groups.

IX. RESULTS OF RESEARCH

1. Analysis of general characteristics of respondents in terms of age, status, education level, affiliated agencies, length of service and training on quality management systems throughout the organization using frequency distribution methods, percentages

2. Analysis of the level of knowledge, understanding of employees about the management system throughout the organization

3. Analysis of employees' opinions on the quality management system throughout the organization in terms of products and services, competitiveness, quality of work life

4. Analyzing employee feedback on quality management practice throughout the organization, paying attention to customers, continuous improvement and teamwork.

A. The Results of Numerical Analysis

In this section, we compute explicit numerical example to illustrate the analytical results. Assuming demand realizations at the two locations are independent and distributed normally, with mean 100 and standard deviation 50. Thus, we truncate the distribution at 0 and redistribute this proportionally to the positive part of the distribution in order to rule out negative realizations of the demand variable. It should be noted that higher mean and slightly lower variance.

The results as shown in Fig. 5 and shown in Table 1, transshipment improve profitability considerably over the case where transshipments are not permitted and we can be arrive at the highest increment in profitability when inventory orders are centrally coordinated as per this study. It could further be seen that, the equilibrium order quantity is increasing in the transshipment cost price, and there exist a coordinating transshipment price that decentralizes the joint-profit maximizing outcome.

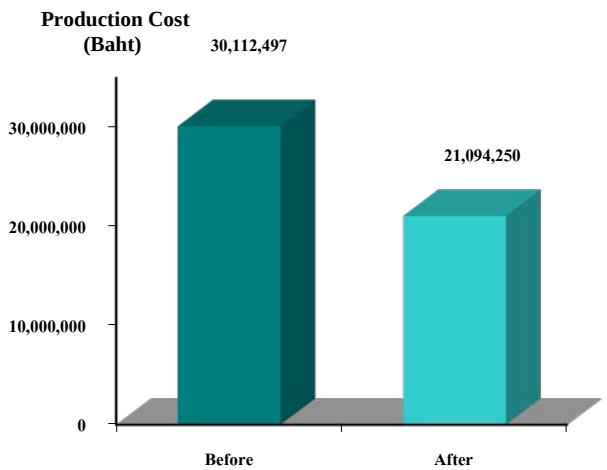

Fig. 5 The results to reduce for production cost in the warehouse during product and after adjustment

Table 1 The results of the consumer attitude in the warehouse quality management with personal factor of industry business in Thailand

The factor is personal		Attitude	
		Frequency	Percent
1. Gender	Male	63	49.6
	Female	64	50.4
2. Age	lower 30 year	60	41.3
	30-40 year	49	29.7
	41-50 year	35	21.6
	51 year go up	18	7.4
3. Education level	lower the bachelor's degree	22	17.3
	bachelor's degree	95	74.8
	tall more the bachelor's degree	10	7.9
4. Work position	Suppot& Service	33	26.0
	Operation	94	74.0
5. Accounting work experience	lower 1 year	59	46.5
	1-5 year	24	18.9
	6-10 year	11	8.7
	10 year go up	33	26.0
6. Number of training attend per year	never be in training	20	11.7
	be in training 1-2 time	58	39.5
	be in training 3-4 time	42	30.2
	be in training 5 time go up	30	18.6

B. The Results of The Operation

The results of the survey of activity areas in the planning and analysis of expenditure. To reduce production cost in the production of electric motors of the company by monitoring and evaluation. Small and medium-sized businesses place importance in level of quality testing of raw materials, significantly less than large businesses, probably because of the lack of experts with the ability to monitor the quality of raw materials. For in addition, this type of industry also uses technology as an important production factor. Compared to the expenditure used after the saving operation, and the before operation energy costs.

In this section, thus we compute explicit numerical example to illustrate the production control results. Assuming demand realizations at the two locations are independent and distributed normally, with mean 100 and standard deviation 50. We truncate the distribution at 0 and redistribute this proportionally to the positive part of the distribution in order to rule out negative realizations of the demand variable. It should be noted that higher mean and slightly lower variance as shown in Fig 6. Thus, transshipments decisions improve profitability considerably over the case where transshipments are not permitted and we arrive at the highest increment in profitability when inventory orders are centrally coordinated as per this study. It could further be seen that, the equilibrium order for warehouse quantity management control is increasing in the transshipment price, and there exist a coordinating transshipment price that decentralizes the joint profit maximizing total outcome. If the parent firm could however, which impose a transshipment price cost. It would result in inventory orders maximizes aggregate profits, and in Fig. 6 as shown the results of transshipment decisions of marketing business control with optimal inventory quantity management of product in the warehouse during production.

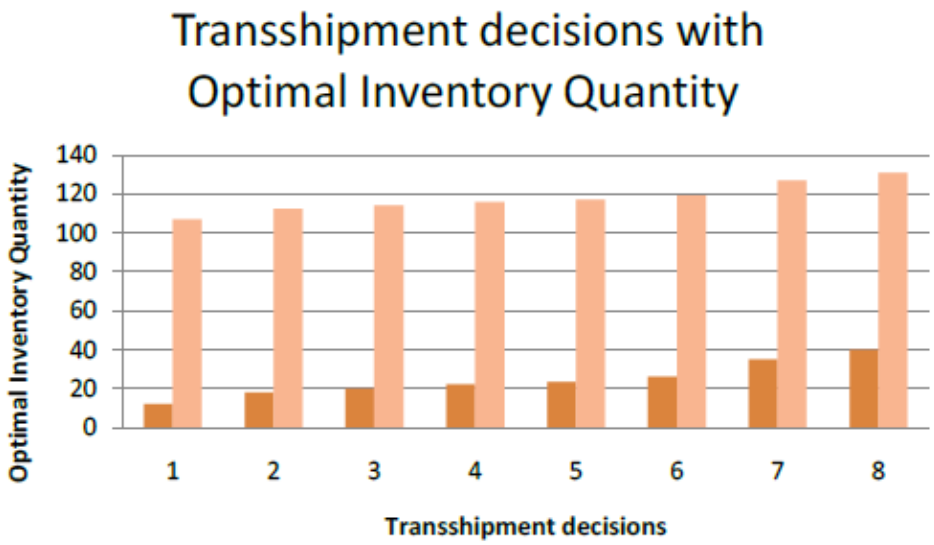

Fig. 6 The results of transshipment decisions with optimal inventory quantity management of product in the warehouse during production

Table 2 The results of the analysis of the level of knowledge, understanding of employees about the entire organization's management (TQM) is successful in products, services and competitiveness

Variable	Number	Mean: ($\bar{x}$)	Std. Deviation: (S.D.)
1.TQM is quality management throughout the organization that everyone participates	145	3.45	1.12
2. Competitive advantage in business	86	3.26	0.95
3. TQM is a technique that creates confidence in the operation	123	3.11	1.28
4. Organizations can produce quality products and services that are acceptable	92	3.59	0.74
5. The use of TQM makes service fast and saves work time	110	3.68	1.05
6. The use of TQM to make customers satisfied and get more satisfaction	54	3.32	0.68

X. CONCLUSION

The results of the research as shown in Table 2, that the employees gave importance to teamwork, employees were proud of their work and were satisfied with working with others. TQM work contributed to the unity in the organization. And considering the lower average score, employees will see that TQM does not help make the job more efficient and does not result in customer satisfaction in generating profits or new technologies.

The TQM system is a system that looks at the whole organization as a system that improves planning, organization and understanding of activities related to each person [12]. To improve efficiency for work to be competitive, the important thing of the system is the relationship between producers and consumers. The process is at the management needed for the system, tools and team. This system has prepared the scope of work progress to be ready for checking the TQM process chart.

Total quality management is a management approach for people-centered. (People-Centered Quality Management) by focusing on creating awareness for executives and practitioners at all levels throughout the organization that "quality" is important to customers as much as "the value of people" in their body. This management system does not neglect the standardization. Just give more weight to the attitude of people towards quality than that, focusing on the importance of creating people to be creative all the time to find ways to improve their products and services for better quality.

XI. ACKNOWLEDGEMENT

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