

Superior Management Support and Coffee Introduction Technology on Operational Performance CCT Company

Almerindo Bianco Sequeira^{1*}, Luciana Andrawina²

^{1,2}Department of Industrial Engineering, School of Industrial and System Engineering, Telkom University
Jl. Telekomunikasi No. 1 , Bandung, 40258, Indonesia

*sequeira@student.telkomuniversity.ac.id

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ABSTRACT

An important area in the company is the operational field that ensures business operations to improve the company's operational performance over a certain period. The purpose of this study is to propose a conceptual model for further research on the effect of superior management support and coffee introduction technology to improve company operational performance. Operational performance refers to the company's capability, which is indicated by the aspects of cost, production volume, fulfilment of demand, customer handling, process control and quality. A number of data will be required and collected in this study to test the existing hypothesis models. The data were collected using a questionnaire that was distributed directly to individual workers in the company with positive questions on a 6-point measurement scale from strongly agree to strongly disagree. Data processing will be carried out using the SEM-AMOS method. One of the results of operational performance is customer focus, which is the orientation of a series of services provided to customers to improve customer satisfaction. The mechanism for eliminating waste and creating added value for the company is process control and improvement at every stage of the process in the company. The results of this study present a conceptual model for further research with the aim of knowing the effect of superior management support, consumer focus, and process control, and coffee introduction technology on the operational performance of CCT companies in Timor-Leste.

Keywords:

Superior Management
Support, Coffee Introduction
Technology, Operational
Performance.

1. Introduction

Timor-Leste economy in general, 80% from the agricultural sector, the main commodity of agricultural products that are exported or reach the international market is coffee. In general, the coffee production process is still traditional, such as the planting, cultivation, harvesting and post-harvest processing which reduces the quantity and quality as well as the selling price in the market. The area of coffee farms in Timor-Leste is 59,278 ha, the total organic coffee farmers in Timor-Leste is 51,000 families, or 1/3 of the coffee farmers out of 80 percent of all farmers in Timor-Leste [1].

The Cooperativa Café Timor (CCT) company, as one of the largest companies in Timor-Leste investing in coffee agribusiness, has 16 farmer groups with a coffee plantation area of 28,639 ha to supply cherry coffee to the company. The results of the coffee production from the CCT company are marketed domestically and exported

abroad. Products that are exported are green bean coffee with grade I and grade II quality and coffee products in the domestic market, namely ground coffee and fried bean coffee with quality from grade I to grade III according to the price set by the company. Domestic marketing is to super markets, hotels and government institutions and exports to company business partners with an export target of 95% of total production each year, of the total percentage exports to the company's main partners, that's Starbucks 53%, Royal Coffee, HA Bennett & Sons in Australia 32%, European states 10% according to the annual trade contract between the company and 5% for domestic marketing [2]. The following Table 1. sales of coffee products from CCT companies for the period 2019.

Table 1 - Sales of CCT Company Coffee Products in 2019

Types of products	Coffee product type	Total sales (ton)	Export destination
Green Bean Coffee	Grade I	1.245	Starbucks USA
		420	Royal Coffee USA
	Grade II	374, 33	H. A. Bennett & Sons di Australia
		78	Portugal
Coffee Powder	Coffee powder	107	German
	Fried Beans Coffee	945	Timor-Leste
		679	

Coffee agribusiness directly provides good economic benefits to members of the CCT company coffee farming. The supply target volume of cherry coffee that is expected by the company from farm members is 18,500 tons per year, which if produced will get 3,700 tons of green bean coffee, however, the volume of supply of cherry coffee from farm members is very low than the target expected by the company. The low supply quantity of cherry coffee indicates the low operating performance of the company and the lack of support from management to members of the coffee farm to increase the quantity and quality of coffee production in the company's business processes.

In relation to operational performance as defined, that operational performance is a measure of how well the company is performing, which is indicated by aspects of costs, production volume, fulfillment of demand, customer handling, delivery, quality, and speed of introduction of new products or services to the market. which leads to increased income and financial returns for the company [3]. Meanwhile, Truong, et al. [4], said that operational performance refers to the company's capability in controlling costs optimally, on time, effectively using raw materials, and on time distribution to customers. While, Sirma, et al. [5], stated that operational performance is related to the company's operational capabilities, such as increasing effectiveness, productivity, product quality, technology and providing customer satisfaction.

Research conducted by Hadli [3], states that the supporting factors for increasing operational performance are top management support, customer focus, process control and improvement and supply chain management. Meanwhile, Truong, et al. [4], stated that top management support is a good motivation to encourage companies to implement effective and successful supply chain management practices in the company's operations. According to Ahmed [6], said that there are two important supporting actions of top managers, first, top managers are very important to secure financial resources and sustainability required for company operations. Second, top managers are very important to promote corporate alteration.

Coffee introduction technology is an integrated system in coffee farming related to the coffee plant fertilization system, shade, pruning, harvesting methods, post-harvest processing and ways of dealing with pests and diseases of coffee plants [7]. Otieno, et al. [8], stated that coffee farming has a big impact on socio-economic life and the environment. Therefore, the application of science and technology is very important because global farmers and producers have many difficulties in controlling prices and crops, which are greatly affected by climate change. With technology, farmers in the world can share planting experiences, recommend suitable products, update information and even trade good quality coffee products [9].

Based on the explanation of operational performance problems, the variables to improve operational performance in the CCT company coffee agribusiness are top management support, customer focus, process control and improvement and coffee introduction technology on operational performance. Based on the explanation of operational performance problems, the variables to improve operational performance in the CCT company coffee agribusiness are superior management support, consumer focus, process control and coffee introduction technology to operational performance. For variable superior management support, consumer focus, process control and operational performance based on research model from Hadli [3], while the variable coffee introduced technology based on the phenomenon of problems that exist in the CCT company itself and based on theoretical support about these variables from Oelviani, et al. [7], with the aim of knowing whether coffee introduced technology is needed now and in the future to increase the quantity of cherry coffee production volume, especially in coffee agribusiness

companies. To explain and predict the sustainability of coffee agribusiness operational performance, there are four independent variables, namely superior management support, consumer focus, process control and coffee introduction technology which affects the dependent variable of operational performance.

2. Literature Study

2.1 Operational Performance

Many studies have been conducted to determine the impact of top management support, customer focus, process control and improvement and supplier management to improve operational performance, one of which was carried out [3]. This study examines the significance of supply chain management practices, customer focus, top management support and process control and improvements towards the operational performance, Figure 1 [3].

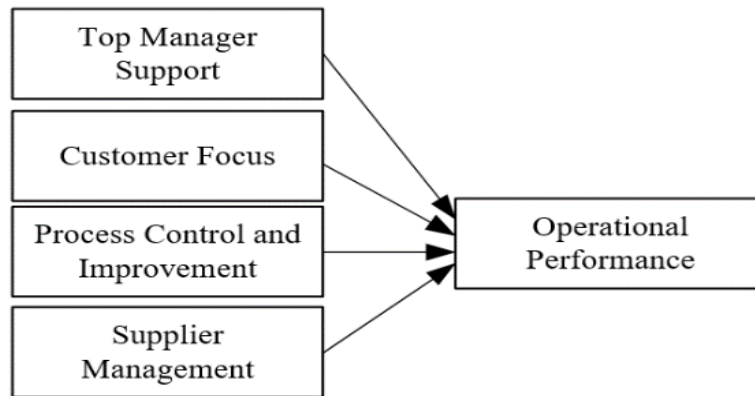


Fig. 1 - Determination of Operational Performance

There are five variables, ten dimensions and thirty indicators from the scientific literature of previous researchers in Table 2, these variables include top management support, customer focus, process control, and improvement coffee introduction technology on the sustainability of the company's operational performance. This relationship suggests that it contributes to the theory that superior top management support practices can result in good corporate performance through the simultaneous dissemination of appropriate supply chain practices. In Table 2. it can be seen the variables, dimensions and research indicators.

Table 2 - Variables and Indicators

Variable	Dimensions	Indicator	References
Superior management support	Planning	Provide programs to increase resource capacity	[3]
		Provide the resources needed by employees to increase the quantity of production	[3]
		Provision of the resources necessary for the process	[3]
		Supports feedback from the information technology department	[4]
Superior management support	Control	Participation in the company's supply chain development process	[3]
		Responsibility for the company's operational performance	[3]
Consumer Focus	Customer needs	DeDetermine the needs and wants according to the wishes of the customer determine customer needs and wants	[3]
		Use information from customers in the service system	[4]
	Customer service	Understanding of the product or service by employees	[4]
		Commitment to satisfaction of customers	[4]
		Resolve customer problems immediately, quickly	[4]

Process control	Quality improvement strategy	Use of statistical techniques	[3]
		Use of an automated process	[3]
		Use of quality control tools to determine control of manufacturing processes	[3]
	Process Improvement	Use of equipment for maintenance preventive	[3]
		Clarify work rules or processed	[3]
		Information about quality performance is readily available to employees	[3]
Coffee introduction technology	Introduction technology	Conducting counseling to farming business members about coffee introduction technology	[8]
		Provide post-harvest technology to ensure the quality of coffee production	[8]
		Apply coffee introduced technology to control pests and diseases	[8]
	Information Technology	Communicate with strategic suppliers through a computers system	[10]
		Coordination between companies is facilitated through electronic connections.	[10]
Operational performance	Raw material	Reduction the rate of material breakdown	[3]
		Reducing the level of damaged raw materials	[3]
		Guarantee standard raw materials	[3]
	Market growth	Make an increase in market share growth.	[3]
		Maintain loyalty from existing market share	[3]
		Reduction of delays in delivery and distribution	[3]

There are 10 main drivers of operational performance that have proven to be very valuable over the years in the company [11], namely 1. reducing procurement costs, 2. optimizing production 3. optimizing distribution, 4. optimizing after sales service, 5. reducing overhead costs, 6. optimize information technology systems, 7. reduce product complexity, 8. reduce product costs, 9. reduce working capital and 10. optimize capital expenditures.

2.2 Superior Management Support

On research [4], revealed that superior management support will offer innovation for continuous improvement, provide reliable resources in the company's operation process, promote partner involvement in company activities, participate in the company's supply chain improvement process, review supply chain issues in superior and responsibility management meetings responsible for operational performance. Meanwhile, supervisory support in the company is the extent to which the superior management understands and implements the importance of the work operational function and is personally involved in the company's operational activities actively [5].

The role of top management in a company consists of five main things, namely compiling and setting plans, determining company goals, managing management under it, managing company resources and being responsible for management under it. The operational management planning literature consistently emphasizes the importance of top management support for the success of any organizational activity. A supportive managerial attitude will provide executives and employees with an environment where their work will be recognized and valued, therefore it likes to motivate employees to achieve higher performance in company operations [3].

2.3 Consumer Focus

Consumer focus is determining the needs and wants of the customer. Information from consumers is used in designing products and services that help companies better understand consumer expectations and market opportunities [3]. The meaning of consumer focus is to meet the needs and expectations of current and potential customers by developing a comprehensive understanding of customer needs then providing perceived good value to customers [12].

In a study conducted by Kavulya, et al. [13], explained that the main active tools for understanding customer satisfaction and needs the implementation of customer satisfaction surveys, more sophisticated customer value

analysis tools and techniques based on quantitative and qualitative indicators, the expected results from customer focus is to create value for customers which leads to loyal customers which in turn leads to increased business.

2.4 Control Process

Process control is essential for flexible adaptation. Process control is the use of statistical techniques to increase the level of automated processes that are easy in designing processes that involve very easy use of automated operational process design and prevention equipment at the stage of effective enterprise operations [3]. Meanwhile, in the research conducted by Bakar, et al. [14], said that for products that require new technology and processes, process control is needed for the continuity of their operations. Process control is essential for flexible adaptation. Some variance reduction efforts can help innovation within the company by reducing some of the errors associated with developing new products or processes within the company [15].

2.5 Coffee Technology Introduction

Coffee introduction technology is an information system in coffee farms agribusiness about the coffee plant fertilization system, shade, pruning, harvesting methods, post-harvest processing and ways to deal with pests and diseases of coffee plants [7]. The introduction of an introductory technology system will have a positive impact on the coffee tree planting process by helping farmers collect and share details information about their crops related to the timing of pruning and replanting coffee plants, shade management, fertilization applications, integrated pest management, weed control, and harvesting methods to improve productivity of coffee production. With technology, farmers around the world can share planting experiences, recommend suitable products, update information and even trade good quality coffee products [9]. Meanwhile, coffee farming has a major impact on socio-economic life and the environment, therefore the application of science and technology is very important because global farmers and producers have many difficulties in controlling prices and crops, which are influenced by climate change [8]. The low quantity and quality of coffee production is due to the fact most coffee farming businesses and communities have limited capital and access to technology [2].

In the research conducted by Belyi [16], said that farmers need to be given the skills needed to increase the productivity of coffee production. The training system and practising to increase the productivity of coffee production are related to the coffee introduction technology system, these practices include Pruning and rejuvenating Coffee Plants, Shade management, Coffee plant nutrition, Fertilizer application, Integrated pest management (including leaf rust control and treatment) , Weed control, Composting, Mulch, Safe use of pesticides, Erosion control and environmental protection and Harvesting.

2.6 State of The Art

Superior management support for operational performance was examined [17], on multi-technology organizations using the SEM method. This research analyzes two main things, first, superior management support for information and communication technology in each management process (knowledge acquisition, transfer, and using). Second, it analyzes the effect of each knowledge management process on organizational performance. It is the same as the research conducted by Sirma, et al. [5], but different research entities and research locations and research methods used.

Tabel 3 - State of The Art

No	Author (year)	Title	Research Variable
1	Tseng, et al. (2014) [18]	The relationship of continuous improvement and cleaner production on operational performance: A study in electronic manufacturing in Taiwan China using SEM Method.	Cleaner production, continuous improvement, Operational performance
2	Hadli A, (2017) [3]	The determinants of firm operational performance Using Regression Analysis and SEM	Customer focus, Top management support, Process Control and Improvement, Supplier management, Operational performance

3	Salam R, (2017) [18]	The mediating role of supply chain collaboration in the relationship between technology, trust and operational performance an empirical investigation Using SEM-AMOS	Trust, Technology supply chain collaboration, operational performance
4	Kavulya, et al. (2018) [13]	Effect of Customer Focus Strategy on The Performance of Saccos in Kenya using Multiple Regression Analysis	Customer Focus Strategy: <ul style="list-style-type: none"> ● Customer services and quality ● Customer relationship management <ul style="list-style-type: none"> ● Pricing. ● Performance
5	Belyi A (2018) [16]	Improving the Productivity and Sustainability of Smallholder Coffee Farmers in Guatemala System Farm College.	Improving, Productivity and Sustainability, Performance
6	Sirma, et al. (2019) [5]	Effect of Top Management Support on Operational Performance of Commercial Banks in Kenya, Using reliability descriptive and inferential statistics	Top management support: Communication, establish integrity and trust culture, Providing resources. Operational performance.
7	Almerindo Bianco Sequeira and Luciana Andrawina (2020)	Superior Management Support and Coffee Introduction Technology on Operational Performance CCT Company	Superior Management Support, Consumer Focus, Process Control and Coffee Introduction Technology Operational Performance

Conducted research related for the process control and improvement in multi-companies using the Regression Analysis method to praise the universal benefits of process management and its impact on operational performance [15]. Meanwhile, investigated the effects of continuous improvement and net production on operational performance in the electronic manufacturing industry using the structural equation modeling method [18].

Research conducted by Salam [10], to understand the relationship between trust, technology and supply chain collaboration and its impact on operational performance in multi companies using the SEM-AMOS method in Saudi Arabia. Whereas Otieno, et al, (2019), conducted their research in Tanzania which assessed and provided a better understanding of the current coffee production situation and appropriate technology and practices to increase the quantity and quality of coffee production with quantitative and qualitative approaches.

3. Conceptual Model

This study integrates two factors that are predicted to affect operational performance and provide further strategic factors in coffee agribusiness. There are several factors that can affect operational performance for a complete display of the company's performance for a certain period of time. Factors that can affect the company's operational performance including superior management support, consumer focus, process control to operational performance Hadli, (2017), and coffee introduction technology factors in operational performance based on the phenomenon of research problems and support from previous researchers Otieno, et al. [8]. Each of these factors can affect operational performance directly and for top management support variables are first moderated by the coffee introduction technology variable.

It's evident from the previous literature that the effect of operational performance in various fields, both in manufacturing industry and the service sector, but the influence of top management support, customer focus and coffee introduction technology in the company operational performance has not been found to affect its success in the coffee agribusiness or coffee processing industry. Based on this literature, a conceptual model is offered for further research as shown in Figure 2. The proposed conceptual model. From this conceptual model, five hypotheses will be tested, namely:

- H1: Superior management support affects in operational performance.
- H2: Coffee introduction technology effect in operational performance.
- H3: Superior management support and coffee introduction technology together significant effect on operational performance.

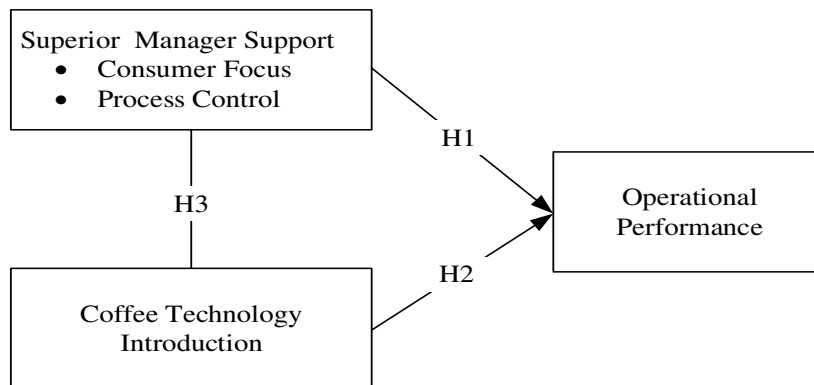


Fig. 2 – Conceptual Model

Table 4 - Definition of Variables

Variables	Definition
Superior management support	Superior management support is an important motivation to drive a company towards optimal and successful supply chain implementation
Consumer focus	Consumer focus is the determination of consumer needs and wants and feedback information from consumers is used to design products and services in the company's operational system
Control process	Referring for the using of statistical techniques, a very easy and safe automatic process level increase in the design process which involves convenient use of process design, automation and prevention equipment to minimize the possibility of errors in the operation of company
Coffee introduction technology	Integrated systems in coffee farming related to coffee fertilization systems, shade, pruning, harvesting methods, post-harvest processing and ways of dealing with pests and diseases of coffee plants
Operational Performance	A measure of how well the company is performing, as indicated by the aspects of cost, production volume, fulfillment of demand, customer handling, delivery, quality, and speed of introducing new products or services to the market that lead to increased revenue and profits for the company

4. Data Collection and Data Processing

4.1 Data Collection

In this study, a research conceptual model was developed to demonstrate the premise that superior management support and appropriate coffee introduction technology would improve the operational performance of coffee agribusiness. Collecting data in this study using questionnaires, positive questions on a 6-point measurement scale such as; Strongly disagree 1, disagree 2, somewhat agree 3, quite agree 4, agree 5 and strongly agree 6, which are distributed directly to working individuals in the CCT company. The characteristics of the respondents identified in the company are as follows:

1. Length of work
2. Location of work
3. Work position and

4. Questionnaires related to the research topic Residential areas of respondents in 4 operational areas of the CCT company, namely; Dili district, Ermera district, Ainaro district, Likisa district and members of the CCT Company Farmer Group in the four districts.

4.2 Data Processing

This study by distributing questionnaires directly to respondents within the company to determine and test the characteristics of each respondent about the existing questionnaire. The data collected will be analyzed using the SEM method specifically with the AMOS method, as well as with descriptive statistical analysis to be able to answer research questions and draw conclusions from this research.

A preliminary study has been conducted on respondents within the company which is addressed in table 5 in accordance with the company's operational areas, namely public relations, finance, drying process fields, wet processing, extensions and enterprise diversification. The total number of individuals working in the company is 450 people from 4 districts in several areas where the company operates.

Table 5 – Operational area and total workers

No	Operational Area	Number of Workers
1	Dili	359
2	Ermera	35
3	Ainaro	31
4	Likisa	25

Preliminary study has been conducted in every area by using sampling to test validity and reliability of data. This step has been done to conform the characteristic of response candidate in every selected area.

5. Conclusion

Operational performance has a strong role for the sustainability of the company's operations and the achievement of the company's performance as expected in the company's planning strategy supported by superior management. There are several studies that concentrate on analyzing the most influential factors leading to great operational performance. This study proposes a conceptual model that reflects superior management support, consumer focus, process control as well as coffee introduction technology in the company operational performance for the sustainability of coffee agribusiness operations.

In the future, the research results can be used to design strategic plans to improve the company's operational performance by paying attention to the factors mentioned in the conceptual model. The next job is to test a model based on research entities, namely the coffee agribusiness or coffee industry in Timor-Leste, knowing that top management support for introduced technology in the farm definitely it useful for increasing the quantity and quality of coffee production to meet customer demands in the coffee business process and sustainability of agribusiness operations. Several samples are needed to ensure that the model can be applied in coffee agribusiness or coffee industry.

In practical terms, this study aims to provide advice to the company managers to create management support strategies to focus on customers, support for good coffee introduction technology and control the improvement of processes as a strategy and motivate for the continuity of the company's successful coffee agribusiness operations. The results of this study present a conceptual model for further research to determine the influence of superior management support, consumer focus, control processes and coffee introduction technology on the operational performance of CCT companies in Timor-Leste.

Disclaimer

The authors whose names are written certify that they have no conflict of interest.

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