

IMPROVING THE PERFORMANCE OF SUSTAINABLE HUMAN RESOURCES IN COFFEE BEAN SUPPLY IN THE SATAK COFFEE AGROINDUSTRY, KEDIRI DISTRICT

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ABSTRACT

The supply of coffee beans in Indonesia involves several stakeholders, namely farmers, collectors and KUB (Joint Business Group). Sustainable supply activities are human, economic, social, environmental and technological resource management activities. The aim of this research is to analyze the sustainability performance of human resources in the supply of coffee beans in Indonesia. The data processing stage is identifying the supply of coffee beans in Indonesia. Analysis of identifying the supply of coffee beans in Indonesia, analysis of added value, measurement and assessment of the sustainable supply performance index for coffee beans. The added value of coffee bean supply was analyzed using the Hayami modification. SCOR-AHP (Supply Chain Operations Reference-Analytical Hierarchy Process) is used to measure the sustainability performance of human resources. The supply status of coffee beans is calculated using the Multi-Dimensional Scaling (MDS) technique with R software. The value added ratio for coffee farmers is low (46.58%) compared to collectors with (71.31%) and KUB (86.35%). Farmers' supply performance is 71.99% lower than collectors with a value of 88.15% and KUB 86.77%. The economic dimension of sustainability is almost sustainable (78.39), the social dimension is sustainable (89.25), the environmental dimension is almost sustainable (79.63) and the technological dimension is almost sustainable (67.68). The aggregate value of sustainable supply shows 78.72% which means almost sustainable. This research recommends a strategy for building partnerships between coffee farmers and coffee cafes to improve performance and sustainability of the supply of coffee beans.

Keywords: human resource management, performance, supply, sustainability, dependency

INTRODUCTION

Apart from being known as a maritime country, Indonesia is also known as one of the world's largest coffee producers. Apart from having a high export value, coffee is also very popular among the public. National coffee growth based on the 2023 Indonesian Statistics report from the

Central Statistics Agency (BPS), Indonesian coffee production will reach 794.8 thousand tons in 2022, an increase of around 1.1% compared to the previous year. Looking at the trend in the last decade, national coffee production experienced a decline to its lowest level of 639,355 tons in 2015. However, the number tends to increase in 2016-2021 until it reaches its

highest figure in 2022. In 2022, South Sumatra will become the largest coffee producing province. the largest, namely 212.4 thousand tons or 26.72% of the total national coffee production. Next there is Lampung with coffee production of 124.5 thousand tons, North Sumatra 87 thousand tons, and Aceh 75.3 thousand tons. The following are details of the 10 largest national coffee producing provinces in 2022: South Sumatra: 212.4 thousand tonnes, Lampung: 124.5 thousand tonnes, North Sumatra: 87 thousand tonnes, Aceh: 75.3 thousand tonnes, Bengkulu: 60.1 thousand tonnes, East Java: 45.8 thousand tons, South Sulawesi: 29.4 thousand tons, Central Java: 26.9 thousand tons, East Nusa Tenggara: 26.6 thousand tons, Jambi: 19.5 thousand tons. The Bangka Belitung Islands, Gorontalo and West Papua are the provinces with the lowest coffee production in Indonesia, namely only 0.1 tons or 100 kilograms (kg). On the other hand, the Riau Islands, North Maluku and DKI Jakarta will not produce coffee in 2022 (BPS, 2018).

Coffee supply involves several stakeholders, namely farmers, collectors, processors and distribution to consumers. Supply management can be seen as a cycle that can be divided into three basic forms, namely internal, external and overall supply Kramer, (2019). Internal supply is the flow of materials and information that is integrated within a business unit from supply to consumers and is sometimes called business logistics (Stephen P. Robbins, 2012). External supply is an integrated flow of materials and information within a business unit that crosses between direct supplies and customers, while overall supply is an integrated flow of materials and information within a business unit that crosses simultaneously between direct supplies and consumers. Supply requires measuring supply performance to determine the current performance position, determine strategies that need to be established to improve performance and

improve coordination between supply actors (Robert L. Mathis, 2012).

Sustainable supply is the integration (trade off) of economic, social, technological and environmental aspects to achieve sustainable supply by an organization (Adler et al., 2011). Defining sustainable supply as a representation of the principles of economic, social, environmental and government policy aspects that are linked to the consumer fulfillment activity cycle, such as design, procurement, manufacturing, packaging and distribution activities. That sustainability assessment in industry is generally based on four pillars, namely economic, social, environmental and technological (Amabile et al., 2001). This research assesses the performance of sustainable supply of Satak coffee plantation agrotourism in Kediri district. This research aims to identify and analyze supply mechanisms, analyze added value, measure the performance and supply sustainability index of the Satak coffee plantation agrotourism in Kediri district, and design strategies for improving performance and sustainability of supply in the Satak coffee agroindustry in Kediri district (Toor, 2009).

LITERATURE REVIEW

According to experts, it is important to understand the meaning of human resource management before discussing this issue at a further level (Thomas & Griffin, 1996). Human resources management is a series of organizational activities directed at attracting, developing and retaining an effective workforce. Human resources are an important asset and act as the main driving factor in the implementation of all activities or activities of the agency, so this aspect should be managed well through Human Resources Management (HRM). Because, empowering human resources that is managed regularly and systematically will

produce quality human resources that are qualified and competitive (Stadtler, 2015). To start discussing this issue, you first need to understand the meaning of human resource management according to experts which we will explain below.

The social goal of human resource management is for organizations or companies to be socially and ethically responsible for the needs and challenges of society by minimizing their negative impacts. Organizations or business companies are expected to improve the quality of society and help solve social problems (Stevens, 1990). The implication of the social goals of HRM in companies is that social responsibility is added to the company's goals or what is known as Corporate Social Responsibility (CSR), such as environmental health programs, environmental improvement projects, training and development programs (Research & Development), as well as organizing movements and sponsoring various social activities (Alalwan et al., 2016).

Companies are an integrated part of people's lives. Companies will be effective as long as they carry out activities needed by society. The company's contribution to society indicates that factors outside the organization will influence the organization's activities and progress (Ellram, 1991). The public expects business companies to provide the necessary products and services at reasonable prices, quality and timely delivery. Society expects business companies to adhere to social values and norms. Society wants every business company to be able to absorb and utilize existing human resources and ultimately society wants every employee to be treated fairly and wisely (Douglas M. Lambert, 1998).

Human Resource Management Objectives

Human Resources Management For. Company, the objectives of Human Resources Management (HRM) are as follows (Power, 2005):

1. Determine the quality and quantity of employees who will fill all positions in the company.
2. Guarantee the availability of current and future workforce, so that someone can do it for every job.
3. Avoid mismanagement and overlap in the implementation of tasks.
4. Facilitate coordination, integration and synchronization (KIS) so that work productivity increases.
5. Avoid employee shortages and excesses.
6. Serves as a guideline in establishing employee withdrawal, selection, development, compensation, integration, maintenance, discipline and dismissal programs.
7. Become a guide in carrying out mutations (vertical or horizontal).
8. Becomes the basis for employee assessment.

Human Resource Management Function

The functions of human resource management are (Cox, 1999):

1. Managerial function

Planning. Planning (human resource planning) is planning the workforce effectively and efficiently to suit the company's needs in helping to realize a goal. Planning is carried out by establishing a staffing program. Organizing. Organizing is an activity to organize all employees by determining the division of work, work relationships, delegation of authority, integration and coordination in an organization chart. Briefing. Directing is an activity that directs all employees to work together effectively and efficiently to help achieve the goals of the company, employees and society. Control.

Controlling is the activity of controlling all employees so that they comply with company regulations and work according to what has been planned. If there are deviations or errors, corrective action and planning improvements will be taken.

2. Operational Function

Procurement. Procurement is the process of attracting, selecting, working agreements, placement, orientation, induction to obtain employees who suit the company's needs. Good procurement will help realize company goals. **Development.** Development is the process of improving employees' technical, conceptual theoretical and moral skills through education and training. The education and training provided must be in accordance with current and future job needs. **Compensation.** Compensation is the provision of direct and indirect remuneration, money and goods to employees as compensation for services provided to the company. The principle of compensation is fair and appropriate. Fair means in accordance with work performance, decent means it can meet primary needs and is guided by the government's minimum wage limit and based on internal and external consistency. **Integration.** Integration is an activity to unite company interests and employee needs, in order to create harmonious and mutually beneficial cooperation. The company makes a profit, employees can meet their needs from the results of their work. Integration is the most important and difficult thing in Human Resource Management, because it unites two opposing interests. **Maintenance.** Maintenance is an activity to maintain or improve the physical, mental condition and loyalty of employees, so that they will continue to work together until retirement. Good maintenance is carried out with a welfare program that is based on employee needs and is guided by the company's internal and external needs. **Discipline.** Discipline is the most important function of

human resource management and the key to realizing goals because without good discipline it is difficult to achieve maximum goals. **Dismissal.** Dismissal (separation) is the termination of a person's employment relationship from a company. This dismissal is caused by the employee's wishes, the company's wishes, the end of the employment contract, retirement and other reasons.

Sharing Human Resource Management Knowledge

In their interactions, buyers and suppliers often share knowledge related to consumer needs and preferences, market structure and required acquisitions, the latest product technology, partner strategies and finances, and how to overcome the problems they face. Most researchers agree that knowledge is divided into two types, namely explicit and tacit. In his article, Davis, (1993) explains that tacit knowledge is knowing how an activity is carried out (knowing how), while explicit knowledge is knowing facts and theories (knowing about).

Furthermore, distinguishing between the two is the ability to be transferred and the transfer mechanism between individuals, between places and between times. As stated by Houlihan, (1985), the transfer of tacit knowledge will be slow, expensive, and uncertain if the knowledge cannot be codified and can only be transferred through direct observation and practice over a certain period of time. The opposite will happen to explicit knowledge, where transferability and mechanisms tend to be easier and have lower costs. Recent research from Lambert & Cooper, (2000), shows that when companies are able to combine the tacit and explicit knowledge they have into uncommon knowledge, they will gain a competitive advantage (Mentzer et al., 2001).

Supply Performance

Our definition of supply performance is adopted from the opinion of that supply performance results from relationships carried out based on the level of efficiency and effectiveness obtained. A good relationship between buyers and suppliers is when supply can increase effectiveness (eg: carrying out the right activities) and efficiency (eg: carrying out activities well (Houlihan, 1985). Effectiveness in buyer and supplier relationships consists of developing new products, improving product quality, and other factors that increase innovation and competitiveness; while efficiency consists of reducing costs, increasing on-time delivery, and shortening lead times (Lambert & Cooper, 2000).

Interdependence

Jeffrey Pfeffer, (1977) define interdependence between two organizations as occurring when the goals of one party cannot be achieved without resources from the other party. Previous studies link the concept of interdependence with the concept of power (Coleman & Deutsch, 2015), which was developed based on concepts from the theory of power-dependence relations (Thibaut, 1978). According to this theory, power lies in the availability of alternative resources (Zhang et al., 2019).

In the context of a buyer and supplier relationship, Company A as a supplier will have greater power than the buyer (Company B) if Company A can sell its products to buyers other than Company B at an equivalent or better price, vice versa. Furthermore, this theory also says that power exists at the level of concentration of exchanges that occur (Coleman & Deutsch, 2015). If Company A sells more than 75% of its products to Company B, then it can be said that Company B has more power than Company

A, vice versa. According to Rusbult & Van Lange, (2003), there are two types of dependence between companies, namely asymmetric dependence and balanced dependence. Asymmetric dependence indicates a difference in power between one company and its partners Kartinah & Kong, (2010), where the company may be more or less dependent on its partners. In the context of buyer and supplier relationships, the first example above shows that Company A is in a position that is less dependent on Company B. The second example shows that Company A is more dependent on Company B in carrying out its export activities. Meanwhile, balanced dependence shows a situation where both parties have the same level of dependence (Yunanto et al., 2021). This can be illustrated as follows: Company A is one of three companies given permission by the Indonesian Government to produce certain automotive components, and Company B is one of three companies that need these components in Indonesia. It can be said that the dependence between the two companies is balanced, *ceteris paribus*.

METHOD

Place and time of research

Data collection activities were carried out in the Satak coffee agroindustry, Kediri Regency. This research was carried out in January 2023 – September 2023.

Research Stages

This research was carried out in stages including data collection, procedures and data processing analysis. The stages of data processing procedures and analysis consist of identification of the Kediri Regency Satak coffee agro-industry supply chain, added value analysis, measurement and assessment of the sustainable supply chain performance index in the Kediri Regency Satak coffee agro-industry.

Data collection

Primary data collection in this research was carried out using survey methods and direct interviews with experts. The experts selected are experts who are considered to understand and understand the cultivation, processing and marketing of coffee as well as their reasoning ability to lead to the main question. The selected samples are respondents who represent the population so that the results of data testing apply to all members of the population. This is done to streamline costs, time and availability of respondents to receive interview directions.

Data on added value calculations was obtained from farmers, collectors and KUB with details of farmer group leaders and women farmer group leaders who were deemed to understand the Kediri Regency satak coffee supply business process. The number of farmer respondents was observed with six farmers from three sub-districts who were selected based on probabilistic purposive sampling to have good satak coffee production in Kediri Regency and aimed at certain considerations with the assumption that they represented the sample population of respondents in the field and had knowledge of the field of satak coffee supply in Kediri Regency.

Data processing procedures and analysis

Data processing procedures and analysis consist of several parts following the research objectives. The data processing procedures and analysis in this research consist of supply identification, added value analysis, supply performance measurement, supply sustainability analysis and developing strategies for improving supply performance. Data processing procedures and analysis are explained as follows:

Identification of Human Resource Management Supplying the Satak Coffee Agroindustry

Supply performance measurement aims to support goal planning, work evaluation, and determine future steps at the strategic, tactical and operational levels (Robert L. Mathis, 2012). The satak coffee agro-industry supply was identified using a descriptive-qualitative method supported by the opinions of academic and practitioner sources, field observations and literature studies. The satak coffee agro-industry supply was identified descriptively adapted from the supply development method according to the APO (Asian Productivity Organization) modified by (Thomas & Griffin, 1996).

Analysis of Value Added Human Resource Management Supplies

According to Stadtler, (2015), real added value is influenced by technical factors (production capacity, amount of raw materials used, and labor) and market factors (output prices, labor wages, raw material prices, and the value of other inputs). The added value calculation was carried out using the method of Douglas M. Lambert, (1998) which was modified according to the assumptions of the Satak coffee agroindustry. Some of the modified assumptions are that the measurement of added value is carried out on crops on an annual scale because the output is calculated during one year's sales on the scale of business activities on annual crop products, calculating the added value for three supply actors in a year's harvest season, calculating weight units is more rational if unit prices are used (for example rupiah) (Ellram, 1991).

Analysis of Human Resources Performance Measurement Supplying the Satak Coffee Agroindustry

Supply performance measurement follows the SCOR (Supply Chain Operation Reference) model, which is a standard guideline that can help companies evaluate performance through identifying and calculating supply performance metrics (Power, 2005). The research combines SCOR and AHP in formulating a calculation model for coffee supply performance. AHP is needed to determine the level of importance of supply performance metrics, because each supply business process has a different level of importance so it needs to be weighted (Cox, 1999). The SCOR model is formulated and formed into four levels of the AHP (Analytical Hierarchy Process) decision hierarchy, namely business processes, performance parameters, performance attributes and performance metrics.

Measurement and Assessment of Sustainable Supply Performance Index (Multidimensional scaling (MDS))

MDS has been used by the Fisheries Center at the University of British Columbia, Canada to develop Rapfish (rapid appraisal for fisheries). Rapfish is a rapid assessment technique designed to allow a purposeful, transparent, multi-disciplinary evaluation, but is not intended to replace conventional stock assessment in the determination of a particular quota (Davis, 1993). According to Houlihan, (1985), sustainability analysis is analyzed through several perspectives, one technique for analyzing sustainability status is using the Rapid Appraisal technique. Rapid Appraisal was previously used in fisheries analysis so it was called the Rapfish analysis technique Lambert & Cooper, (2000), but now many studies use this technique in various sectors, including this research. The principle of the Rapfish technique uses the principle of

multidimensional scaling (MDS) by mapping distances from one dimension to another.

Formulation of a Strategy for Improving Performance and Sustainability of Satak Coffee Supply

Performance improvement and supply sustainability strategies are formulated through the AHP technique, which was introduced by (Nwinyokpugi, 2018). The elements in the AHP hierarchy are obtained from the results of performance measurements and supply sustainability assessments. The strategy was formulated and selected based on the assessment of five experts with expertise in coffee agroindustry, coffee supplies and commodities. Determining alternative strategies for improving performance and supply sustainability obtained is a relative value and comparing it with other factors or alternative strategies (Holt et al., 2007).

RESULTS AND DISCUSSION

Satak Coffee Supply Configuration

The supply structure of Satak coffee in Kediri Regency consists of farmers, collectors, joint business groups (KUB), and exporters. Farmers act as the main members who produce satak coffee for consumption in the downstream sector. Satak coffee produced by farmers is distributed to joint business groups (KUB). KUB acts as an actor to increase the added value of satak coffee which will be distributed to exporters.

Supply Chain Value Added Analysis

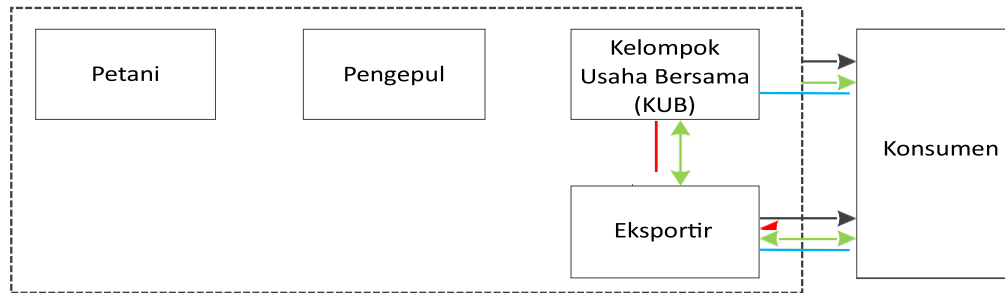
The added value of supply to supply actors was analyzed using the Hayami method with several modifications to adjust variables and units of calculation of added value. The assumptions are based on annual

plants that begin to produce harvests at three years of age with the coffee fruit ripening within 10 months and the harvest

(Stadtler, 2015). On the analysis of the results of questionnaires and field surveys presented in Figure 3, the added value ratio obtained by farmers is 45.59%, collectors 70.30%, and KUB 85.34%. Farmers with limited distribution and transportation knowledge will feel safer and

period for six months, as well as a productive harvest period with the largest harvest within three months

easier to sell their crops to collectors who come directly to the coffee farmers' plantations. This supply mechanism puts farmers in a weak position because middlemen (collectors) will take a large margin (Power, 2005).



Based on the results of the added value analysis in Figure 1, the highest percentage of added value ratio is found in KUB. This proves that the added value ratio at KUB is higher than that of collectors and farmers.

activities carried out. This refers to Yao et al. (2008) that the increase in added value is influenced by the amount of input entered and processed in one work unit.

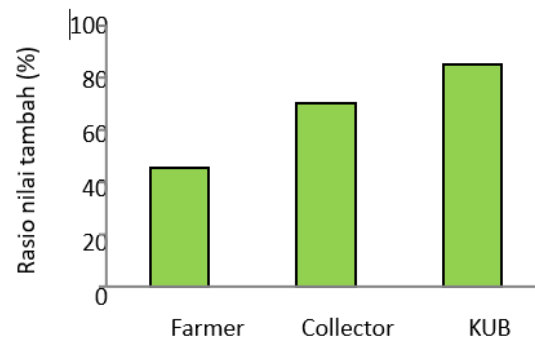


Diagram 1. Supply Chain Actors

The high value added ratio at KUB can also be influenced by the input and production

Weighting Results of Supply Performance Measurement Metrics

The initial stage in measuring supply performance is to establish metrics and weight them based on expert opinion. There are 14 performance metrics with 5 performance attributes determined to measure the performance of the Satak coffee agro-industry supply. The weighting

results of supply performance measurement metrics that are important to pay attention to based on expert opinion using the AHP technique are delivery accuracy, delivery cycle time, capacity increase flexibility, and cost of production. Results of weighting satak coffee supply performance metrics.

Performance Evaluation of Satak Coffee Supply

Based on the results of the situational analysis, the supply actors whose performance was evaluated were farmers, collectors and KUB. Performance evaluation is carried out by assessing 14 supply performance metrics that have been determined in the previous stage. There are adjustments to performance metrics to measure performance for each actor because the value is not identified. Calculation results of supply chain performance, satak coffee agroindustry

The results of the supply performance category for the Satak coffee agro-industry chain players were obtained from actual data in the field and calculated through weighting the SCOR performance metric. The performance conditions can be seen in Table 2, where the performance

conditions of farmers are in poor condition, collectors are in medium condition and KUB is in the medium category. This is in accordance with performance standards according to Monczka et al. (2014) with the interval (1) very good performance, if the performance value ranges between 95% - 100% (2) good, if the performance value ranges between 90% - 94% (3) moderate, if the performance value ranges between 80% - 89% (4) poor, if the performance value ranges between 70% - 79% (5) very poor, if the performance value ranges between 60% - 69% and (6) poor, if the performance value <60%. The low performance value of farmers is influenced by the factors of cultivation cycle time and delivery cycle time which have values of 50% and 33.33%. The satak coffee commodity is an annual plant that has a harvest time of every six months, with the most effective harvest period being three months.

Table 1. Results of measuring the supply performance of the satak coffee agroindustry

Performance Metrics	Bobot	Farmer		Collector		KUB	
		Mark	Perform ance	Mark	Perform ance	Mark	Perform ance
Delivery accuracy	0,095	100	13,500	100	14,448	100	10,756
Item condition is perfect	0,073	100	9,575	90	10,270	90	7,415
Order delivered in full	0,095	100	13,500	80	11,758	100	10,756
Cultivation cycle time	0,078	50	6,120				
Delivery cycle time	0,146	33,334	7,427	100	21,744	100	16,591
Processing cycle time	0,071					100	8,008
Capacity building adaptability	0,058					50	3,262
Adaptability to reduced capacity	0,021					80	1,832
Flexibility to increase quality and capacity	0,078					50	4,406
Service fees	0,025			27,00	0,894	100	2,747
Maintenance costs	0,033	100	5,255	100	4,579	100	3,662
Cost of goods sold	0,102	100	14,431	90	13,005	100	11,557
Profit	0,084			40	5,750	100	3,891
Cash to cash cycle time	0,055	100	8,181	100	8,725	14,286	0,884
Performance Category Results			70,988		85,170		85,757

The process of sending Satak coffee should be done within one day, but in actual conditions it is done within three days. Service costs and profits for collectors are low, this is due to fuel costs borne by

collectors so that the profit from distribution of satak coffee is only 40%. So the condition of the perpetrator's performance is in a medium condition. The next supply actor, namely KUB, has a value

on the adaptability metric of increasing capacity and decreasing capacity at 50% and 80%. This proves that the increase in the percentage of orders sent on an ongoing basis is limited in several ways, for example not being able to fulfill increases and decreases in orders due to the availability of main raw materials and delivery capacity, as well as the availability of labor.

The performance measurement results show that coffee supply performance needs to be improved by paying attention to low performance metrics at the farmer level, namely cultivation and delivery cycle times. Good

Supply Performance Sustainability Analysis

Sustainability indicators

Sustainability analysis requires establishing dimensions and indicators to mutually improve the potential impacts of various supply chain practices. One study according to Thomas & Griffin, (1996) stated that sustainability factors consist of economic, social and environmental dimensions. The sustainability dimension has experienced development in various studies. According to Stadtler, (2015) that sustainability is influenced by economic, social, environmental and material resource dimensions, while according to Power, (2005) that the sustainability index can be measured through social, economic and environmental dimensions. Cox, (1999) say that environmental, social, economic issues and government policies are important aspects in mining sustainability with a fair distribution of costs and benefits. The dimensions and indicators determined in this research refer to Houlihan, (1985) and was developed based on the results of field observations and expert opinion.

cultivation management by paying attention to the management of satak coffee seeds based on selected clone types can increase the productivity of satak coffee plants through improvements through the selection of superior clones. This improvement effort can be carried out with assistance from the Plantation Service in seeding activities and distribution of superior coffee seeds to farmer groups in Kediri Regency. The delivery cycle time for farmers requires an effective time of three days within one week to send product supplies, so it takes longer than the target of achieving product delivery by farmers.

Sustainability Index Assessment of Supply

Sustainability assessment in research, in this case supply, requires a calculation analysis tool in the form of the Rapfish technique which is modified to Rapcoffee using the AHP weight approach. The nature of the analysis refers to multidimensional analysis, namely economic, social, environmental and technological. Sustainability status can be obtained from the assessment according to Lambert & Cooper, (2000), divided into unsustainable, almost unsustainable, medium, almost sustainable and sustainable status. The use of Rapcoffee analysis is applied using R software. The Rapcoffee stage in the R system is carried out by identifying sustainability issues, determining sustainability dimensions and indicators, then entering the data in Excel format and then the data that has been entered into the R software is processed into a sustainability index output.

Economic Dimension Sustainability Index

The assessment of the sustainability status of the Satak coffee supply is calculated using six indicators, namely cost efficiency, cost reduction, customer service, responsiveness to customers,

product quality and product availability. Based on expert assessment, an economic dimension sustainability index value of 77.39% has been obtained on a scale of 0 – 100. This result indicates that the sustainability status based on economic aspects is almost sustainable.

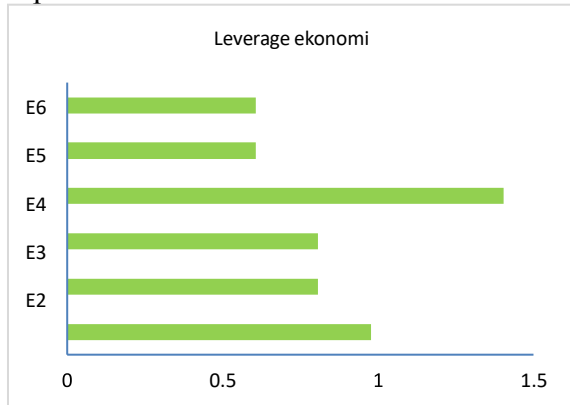


Diagram 2. Economic sustainability index, sensitive indicators that influence economic sustainability

The leverage analysis above is useful for finding out indicators that are sensitive and have a significant effect on increasing the index of a dimension (Kavanagh and Pitcher, 2004). Based on the leverage analysis, it shows that of the six indicators analyzed there are two indicators that are sensitive to the sustainability of the economic dimension, namely (1) responsiveness to customers (1.40) and (2) cost efficiency (0.98). This shows that responsive behavior towards customers and appropriate use of costs can have a big influence on the sustainability of the supply of Satak coffee. Sisaye et al., (2012) explained that the characteristic of responsive supply is supported by several factors, including low costs and response to diverse demand.

MANAGERIAL IMPLICATIONS

This research produces a supply mechanism carried out by three supply chain actors, namely farmers, collectors and KUB. can illustrate that the weak performance factors lie in farmer supply actors and sensitive indicators in the sustainability dimension, namely the

technological dimension. Farmers have the lowest performance scores due to lack of information and knowledge regarding cultivation cycles and appropriate cultivation techniques. The added value for farmers needs to be increased by expanding waste processing activities which will have an impact on increasing farmers' income in addition to selling the main product. This statement is related to the formulation of strategies that can be recommended through empowering farmer groups with techniques for processing coffee waste into high added value products.

Alternative strategies for implementing and monitoring coffee price refraction through coffee farmer associations and the relevant government are expected to be able to provide comprehensive performance improvement and sustainability strategies by providing price protection for coffee farmers and building partnerships between agro-industry players and coffee farmers so that policies governing the supply of coffee commodities start from price fixing, protecting land disputes, and organizing exhibitions of coffee commodity products, assistance by providing field schools for coffee farmers, providing infrastructure and capital assistance in the form of distributing planting seeds with high quality clones are able to increase supply competitiveness and improve the performance and sustainability of satak coffee supplies in Kediri Regency.

CONCLUSIONS

The main actors supplying the Satak coffee agro-industry in Kediri Regency consist of farmers, actors and KUB. Based on the calculation results, the value added ratio for farmers is only 45.59%, collectors 70.30% and KUB 85.34%. A high value added ratio is influenced by sales value, production costs, other input costs and raw materials. Efficient use of production costs is needed to increase industrial profits for

supply chain actors. This research has measured the supply performance of the three supply chain actors, the result is that farmers need to improve performance by strengthening the technology sector so that production increases. The performance results of farmers in the research were lower than those of the two supply chain actors. The highest added value is for KUB actors, namely 85.34%. The measurement results show that the supply performance of farmers is in poor condition, collectors are moderate, and KUB is in moderate condition. The results of the performance measurement analysis illustrate that the performance conditions of the three agro-industrial actors need to be improved in the performance attributes of asset management, agility and costs.

Sustainability assessment is carried out through analysis of economic, social, environmental, technological dimensions and 24 sustainability indicators. The results of the sustainability value indicate two indicators that are sensitive to the sustainability of the economic dimension, namely responsiveness to customers and cost efficiency, two sensitive social indicators, namely law enforcement for land and employment disputes, two environmental indicators, namely waste processing and energy consumption and six technological indicators that are considered to have value sensitive to supply chain sustainability. Based on the results of the assessment of sustainability indicators, the sustainability status is in the almost sustainable range, then it needs to be upgraded to sustainable status in the economic, social, environmental and technological dimensions.

Through the results of performance measurements, there are four important performances that are taken into consideration in developing supply chain performance and sustainability. These four performances are used as sources of weakness in performance factors which can be improved by formulating four alternative

strategies for improving performance and supply sustainability, including the most prioritized building partnerships between farmers and agro-industry, then implementing and monitoring GAP (Good Agricultural Practices) and GHP (Good Handling Practices). coffee commodity, then empowering farmer groups to process satak coffee pulp into value-added products, as well as implementing and monitoring coffee price adjustments based on quality.

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