

# Improving Performance through TQM and SCM with Human Resources Competence as mediation variable on Banana's Plantation Company

Rini Setiawati<sup>1\*</sup>, Darjat Sudarjat<sup>1†</sup>, Hasri Nirmala<sup>2‡</sup>, and Ira Setiawati<sup>1§</sup>

<sup>1</sup>Assistant Professor, Department of Management, Bina Nusantara University, Jakarta, Indonesia, 11480

<sup>2</sup>Lecturer, Department of Management, Darma Persada University, Indonesia

**Abstract.** Many research results and theories say that Total Quality Management (TQM) and Supply Chain Management (SCM) are the main strategies for all small, medium and large businesses. The fresh fruit business prioritizes fruit quality to get customer satisfaction. Besides the fruits' freshness, for the sale of Cavendish bananas, it requires a smooth appearance of the fruit to attract the attention of consumers. The purpose of this study was to see the impact of the implementation of TQM and SCM and whether the impact was also influenced by HR competencies. This research was conducted at one of the banana plantation companies in Indonesia. The research method used is quantitative with PLS as a statistical tool. The results showed that there was a positive and significant influence between TQM on company performance, SCM on company performance. In addition, it is also proven that HR competencies affect the success of TQM and SCM implementation. TQM in the banana plantation industry focuses on increasing the company's competitiveness by involving all employees' efforts to increase competence in all fields. A well-managed supply chain can produce cheap, quality, and timely products so that the target market can be met and generate profits for the company.

## 1 Introduction

Many challenges must be faced in competition in the current global era. Industry is required to be able and have a competitive strategy and competitive advantage. Competitive strategies and high competitive advantages are absolutely necessary for every industry to remain superior. All industries achieve optimal company performance with effective internal capabilities, including the competencies of all employees, TQM and also SCM implementation.

In general, TQM has an understanding of integrated managers and members of the organization or employees who have the thought to continue to improve the quality of the product or service and the process is needed to achieve the needs and expectations of customers. The implementation of the TQM system can be carried out in various business sectors, including in the agribusiness field of plantations. By implementing the approach and application of TQM to ensure the quality of the product to the customer, can provide benefits that can increase profits and competitiveness in the company. HR competencies are very instrumental in implementing TQM because TQM has concepts and methods that require management and management and

management of all companies to consistently meet customer desires or satisfaction.

The organization cannot operate efficiently if isolated from suppliers in the chain unit, so they must ensure that they will be successful in market competition. The role of SCM in improving organizational performance is clear, given that "today the company sees supply chain management as a strategic tool to improve their competitive advantage" [1]. Overall, the definition of SCM in essence has the same meaning, namely, the company tries to describe the organization as an integrated process that involves activities or operations in distribution channels from suppliers to end consumers. Thus, SCM becomes increasingly important because the company begins to realize that SCM is a major factor for creating a sustainable competitive advantage for their business in the current digital era [2].

Employee competence is considered increasingly important, because human resources are valuable assets owned by the company and also determine the success of the company to achieve goals. So it is very appropriate if the competencies owned by employees are the top priority developed in terms of carrying out the main tasks. Efforts to improve employee competencies in order to produce quality products so

\* Corresponding author: [rini.setiawati001@binus.ac.id](mailto:rini.setiawati001@binus.ac.id)

† Corresponding author: [darjat.sudrajat@binus.edu](mailto:darjat.sudrajat@binus.edu)

‡ Corresponding author: [hasri\\_nirmala@fe.unsada.ac.id](mailto:hasri_nirmala@fe.unsada.ac.id)

§ Corresponding author: [isetiawati@binus.edu](mailto:isetiawati@binus.edu)

that they will be able to increase profits and achieve sales targets. Therefore improving the quality of company activities is the key to success in achieving competitive advantage.

Banana is a very popular fruit in the world. Bananas are rich in benefits. Aside from being a "mood booster" this fruit is also important for the health of the human body. No wonder bananas are the most popular fruit in the world.

Banana production trends in Indonesia tend to increase over the past five years. The Central Statistics Agency noted that banana production in Indonesia reached 8.18 million tons in 2020. The number increased 12.39% from 7.28 million tons in 2019. Reported by Kompas.com on 18 February 2020, according to Data from the Trade Map International Trade Statistics (ITC), during 2018 Indonesia has exported as many as 30,373 tons of bananas or 14,610 US dollars to the world. The biggest banana export from Indonesia is to China, which is 17,793 tons or valued at 8,623 US dollars, followed by Malaysia of 4,132 tons or 1,114 US dollars and the United Arab Emirates (UAE) of 2,563 tons or 1,435 US dollars. However, the demand from these countries is still not fulfilled by Indonesia.

Banana cavendish is a priority in banana cultivation. Besides having superior quality, richer benefits, a more beautiful color and higher selling value than other types of bananas, cavendish is one of the banana varieties that dominates the world banana market. Because it can be accepted in various markets, from traditional, modern, to international markets, no wonder the types of cavendish bananas are highly supported by cultivation. The following is an example of an analysis of cavendish banana cultivation business. At present there are not many banana plantations with an industrial scale, respondents of this study are one of the largest banana plantation companies in Indonesia that have just started their business in the last 4 years but can enter the market in Indonesia. Many factors affect company performance. The company has been in the beginning of the product from the beginning and also studied the distribution of products to various regions in Indonesia. As a new company, trying to be able to compete in the market and even though it has implemented TQM and pays attention to SCM, it still produces products that do not match / get consumer complaints. For this reason, research is carried out by including the role of Human Capital in the implementation of TQM and SCM. For this reason, researchers are interested in learning whether there is an effect of TQM, SCM and HR competencies on company performance.

### 1.1 Objectives

The purpose of this study is to see: (1) How does TQM implementation effect on company performance? , (2) What is the effect of SCM on Company Performance?, (2) How does HR competence influence the Company Performance?, (4) How is the effect of TQM on the company's performance with HR competencies as a mediation variable and (5) how SCM influences the company's performance with HR competencies as mediation variables.

## 2 Literature Review

### 2.1 Total Quality Management

Total Quality Management (TQM) is defined as a management method where top management and employees in the organization get the satisfaction of stakeholders [3]. While some researchers define TQM as quality management standards such as ISO 9001. TQM according to [4] is a system of activity centered on customer satisfaction, focusing on social responsibility and corporate management system, always emphasizing the improvement of a constant innovation because The rationale for TQM is needed to find out the best way to compete and be superior in global competition.

In the Industrial Era 4.0, [5] developed socio-technical as an indicator of the success of TQM. Social indicators include (1) Top management, some researchers believe that the success of the implementation of TQM needs to involve top management and commitment [6]. Top Management sets strategic indicator goals and communicates it to staff, supports implementation through resources, training and reviewing what has been achieved [7]; (2) Organizational Culture Quality, applying TQM by not building cultural quality is a disaster, according to [8] TQM requires employee empowerment, such as improving the ability of individuals and teams and also understanding their respective roles in achieving quality goals; (3) Digital skills, equipping workers with skills in the use of digital tools is very important to ensure the quality of future products. In TQM, Quality Control staff must have more analytical -related skills. Quality staff will spend less time in running their operations and more time in solving problems and prevention activities [7]; (4) Smart organization, in TQM leaders need to create and operate organizations intelligently, for example in the case of top management must support initiative to spread organizational knowledge. According to [9] with an intelligent organization, the organizational structure will be slimmer and more efficient. Besides that according to [10] TQM technology will improve communication and cooperation through connections and social networks, encourage innovation and exchange ideas between production partners and stakeholders. ; (5) Intellectual Capital Management, focus on human, social and intellectual capital. TQM also discusses the management of human resources that focus on increasing human capital. It also must develop social capital such as work relations inside and outside the organization and focus on intellectuals such as reputation, employee loyalty, customer relationship, company value and brand image [11]; (6) Automated Document/Data Control and Collection, in TQM the document control should be done automatically and real-time, especially for work design and instructions. TQM must have standard operating procedures to ensure that employees carry out work according to the SOP. Documents/data must also be collected automatically and systematically, for example the amount of goods that are not appropriate, the number of

used goods, the number of workers used, productivity produced, including data related to customers such as the level of satisfaction, the amount of exit, the goods returned, and others.

[12] explains that TQM focuses on increasing competitiveness in companies whose focus is mainly satisfaction from customers by involving all employees' efforts to improve in all fields with: (1) focus on customers (customer focus), the core of goals From a business that is to create and also maintain customers to remain loyal to the products or services that have been used. In the TQM approach, organizations must be able to understand the process and understand the criteria of a customer. In this way, the organization can appreciate the meaning of quality because the quality of a product or service is determined by the customer. Based on this, in the application of TQM the main purpose is to customer satisfaction. Successful companies in applying focus on customers have the following seven characteristics: (a) vision, commitment and atmosphere; (b) aligning with customers; (c) willingness to identify and solve customer problems; (d) utilize well the information obtained from customers; (e) approach the customers; (f) the ability, ability and empowerment of employees; (g) Improvement of the product and the process continuously. (2) Continuing improvement, in the total quality management process, making improvements in quality and productivity is part of the main element. In order to achieve maximum results from an improvement requires a large effort from the existing human resources in the organization. Sustainable application will be able to encourage the implementation of the TQM process to be better in a company. (3) Education and training, education and training are the same thing, only education is seen to be more theoretical while training is specific. Employees must understand and be able to realize these two things in order to be able to produce effective and efficient performance when doing work. (4) Involvement and empowerment of employees, in the implementation of TQM it requires the participation of all employees in the organization, starting from decision making and also problem solving. Employee involvement is an employee empowerment as well.

## 2.2 Human Resources Competencies

To achieve good quality and performance requires high human resource competence because it is needed in running the system well. High HR competencies will affect performance for the better and higher quality than HR with low competencies. Competence is a combination of the skills and abilities of someone needed in a job and function in managing work. With adequate skills and abilities, HR competence can influence in doing work and facilitating work. Superior human resources can also complete their duties and responsibilities faster and correctly in the specified time. [13].

According to [14] competence is the ability to do work in accordance with the skills and knowledge supported by the attitudes demanded by the organization. Competency is divided into two types,

namely behavioral competence that is paying attention to someone's attitude how to behave in order to do his work well. The second type is that technical competence means a picture that must be known or done by an employee to be able to do his job well. While in the company the employee is required to be able to develop themselves so that employees can advance in all aspects and usually there are some companies that provide these facilities so that employees can continue to provide satisfactory results. Employees with the goal of improving their practice or technical, theoretical, and conceptual knowledge, as well as the ability to achieve good performance and achieve optimal results for the company, are required.

According to [15] there are five categories of HR competencies, including task achievement, relationships, personal attributes, managerial abilities, and leadership.

- 1) Task Achievements  
Categories of capabilities related to performance achievement. This ability is oriented towards results, performance management techniques, influence, initiative, efficiency, production, flexibility, innovation, care about quality, continuous improvement (continuous), and technical expertise.
- 2) Relationship  
The ability to communicate with others at work. Examples include service orientation, cooperation, interpersonal care, organizational intelligence, building relationships, conflict resolution, focus on communication, and cross-cultural sensitivity.
- 3) Personal Attribute  
Individual internal abilities related to how someone thinks, feels, learning, and developing. Personal attributes related to integrity (honesty), self-development, and self-confidence.
- 4) Managerial Ability  
Ability specifically related to the ability to manage, supervise, and encourage others to develop. This is usually applied to the forms of motivation, empowerment, and development of others
- 5) Leadership  
Capabilities related to leading an organization or company to achieve organizational goals. In terms of leadership, competencies are related to insight, future views (visionary), strategic thinking, accepting and managing change, building commitments in organizations, and work culture values.

## 2.3 Supply Chain Management

To meet the needs/demands of the company's market should apply the concept of Supply Chain Management (SCM). Supply Chain Management is a production process and activity starting from the raw materials obtained from suppliers, the process of adding values that convert raw materials into finished goods, the process of storing inventory to the process of sending the finished goods to retailers and consumers [16]. Supply chains that are well managed can produce cheap,

quality and timely products so that the target market can be met and generate profits for the company

According to [17] In a supply chain network there are three kinds of streams that must be managed: (1) the flow of goods flowing from upstream (upstream) to downstream (downstream). For example raw materials sent from suppliers to the factory. After the product is finished produced, the item is sent to the distributor, then to the retailer or retail, then to the final user. (2), the flow of money and the like that flows from downstream to upstream. (3) The flow of information that can occur from upstream to downstream or vice versa, for example information about the inventory of products that still exist in each supermarket is often needed by distributors or factories. Companies must share information like this so that the parties concerned can monitor for more accurate planning purposes

Consistent with [18, 17] Supply chain management has become a strategy used by the company. Because with an integrated relationship between the supplier chain and the company can minimize the total costs consisting of raw material costs, transportation costs, facilities costs, production costs, inventory costs, and so on. For supply chain management companies can become competitive advantages where supply chains are a series of goods/physical streams, information and processes used to send products or services from the source location (supplier) to the destination location (customer or buyer). In other words the supply chain is a series of approaches used to integrate suppliers, producers, warehouses and shops so that the goods produced and distributed are in the right amount and time to minimize costs.

According to [16, 19, 20, 18, 17] Every company always reviews the survival of the company for each certain period to find out the status of a healthy company and maintain the existence of the company. This activity is often also referred to as company performance. Company performance has an understanding as a result of a management activity in a company. The results of this management activity are then made as a parameter or benchmark to assess the success of a company in terms of achieving the goals set in a certain period. Company performance is something that the company produces in a certain period by referring to the standards that have been determined. Business performance refers to how many companies are oriented to the market and profit.

Business performance refers to how much the company is oriented towards the Market as well as profit goals. [21] stated that in an integrated supply chain there are the following processes : (1) Strategic Supplier Partnership is defined as a long-term relationship between the company and its suppliers. By implementing a strategy that partners with suppliers, it allows companies to work effectively with several suppliers who are willing to share responsibility for creating and making a product successful, (2) Customer Relationship, Companies that have customers who are willing to commit to building relationships, then this is an advantage for the company. With a good relationship with customers, this allows a company to differentiate its products from competitors, can increase customer

loyalty, and can create value to customers.(3) Information Sharing, Sharing information between business partners can be in the form of strategic tactics, general market conditions, and information about customers. By exchanging information between members in the supply chain, this information can be used as a source of competitive advantage.

## 2.4 Company Performance

Performance is a process of identification, development of performance and harmony working with the objectives of organizational strategy. The company's performance according to [22], suggests as an important role that must be achieved by the company, performance is a picture of the ability of a company in managing every resource owned. In a good performance measurement is done with a set of performance measurement standards that can provide useful information for companies to help manage, control, plan, and carry out company activities. The effectiveness of quality management in the application of TQM can be seen whether the company can integrate and develop TQM concepts as a whole [23].

This non-financial performance is also known as operational performance where its aspects are able to measure performance when the available information related to opportunities already exists, but has not been realized financially [24]. In today's world, the emergence of competitive markets and the need for growth and development in the economic and social spheres have led to special attention from society, especially companies to performance, and companies in various ways seek to improve their performance. In other words, in today's business environment, one of the most important concerns of managers is to give the best organizational performance and they try to continuously measure their performance and compare it with their competitors so that they can take the necessary steps to achieve the goals. the level of performance that keeps them in the market. [25].

Performance can be considered as a measurable result of organizational decisions and actions, which shows the level of organizational success and a series of achievements achieved. Performance refers to three fields including market performance, financial performance and shareholder performance. Market performance includes issues of market share, sales, etc., and financial performance includes profitability, the rate of return of assets and the rate of return on capital, and the performance of shareholders includes added value, the rate of return of shareholders, and so on [26].

According to [27], performance is a broad concept that includes what the company produces and the area in which the company interacts. In other words, organizational performance refers to how the mission of the organization, duties and activities and the results of their performance is carried out. In other definitions, organizational performance achieves or exceeds organizational and social goals and fulfills organizational responsibilities. Performance is a term that combines the concept of activities to do work and the results of the activity. In fact, performance is the

result of action. Thus, performance is a general structure that refers to how the operation is carried out.

### 2.5 Hypothesis

The hypothesis in this study is H1: TQM Implementation has an effect on Company Performance, H2: SCM has an effect on Company Performance, H3: HRC has an effect on Company Performance, H4: TQM Implementation has an effect on Company Performance with HR competence as a mediating variable, H5: SCM has an effect on Company Performance with HR competence as a mediating variable.

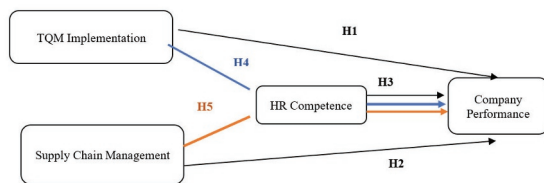


Fig. 1. Research Model

### 3 Methods

This study uses a type of quantitative research method. The data collection method used in this study uses the Library Research and Field Research methods. Literature research is conducted to obtain data on theories that support research. Meanwhile field research was conducted to find out the conditions that occur in the field more clearly and compare with the theory that has been set.

This research was conducted with a direct survey on the object of research, namely one of the Cavendish Banana Plantation companies in Indonesia. The data analysis technique in this study uses the Partial Least Squares (PLS) method. SmartPLS (Partial Least Square) version 3.2 is a statistical software to test the relationship between variables, including latent variables and indicator or manifest variables. Many educational studies that use SmartPLS.

### 4 Data Collection

The data collection method used in this study uses the Library Research and Field Research methods. Literature research is conducted to obtain data on theories that support research. Meanwhile field research was conducted to find out the conditions that occur in the field more clearly and compare with the theory that has been set.

This research was conducted with a direct survey on the object of research, namely one of the Cavendish Banana Plantation companies in Indonesia. The data collection instrument used is a questionnaire. The questionnaire is a set of questions that logically related to research problems, and each question has significant answers to test the hypothesis. The sample uses the Slovin formula with a total sample of 300 respondents

## 5 Result

Of the 300 respondents who have filled out research questionnaires from various departments such as the Internal Supervisory/SPI Department, Farming Service, Business Control, Quality Control, Warehouse, Finance, Information Technology, Treasury, Purchasing, HRD, Male and Female Frequency RND: 72% : 28%, the most age in the range 26-40% is 54%. The highest level of education is 48% undergraduate/graduate and the working period between 1-5 years is 78%.

### 5.1 Outer Model

The purpose of evaluating the measurement model is to assess the validity and reliability of the model. Validity testing aims to ensure that each item in the research instrument can measure the variables specified by the research. There are 2 kinds, namely convergent validity and discriminant validity.

Convergent validity is a measurement model with a reflective indicator assessed based on the loading factor of each indicator of the latent construct forming. A latent construct is considered to have a convergent validity if the loading factor value is more than 0.7 and significant. The initial stage of the development scale development, then loading factor 0.5 to 0.6 is considered sufficient [28]. An invalid statement will then be dropped from the table. Running results are as follows:

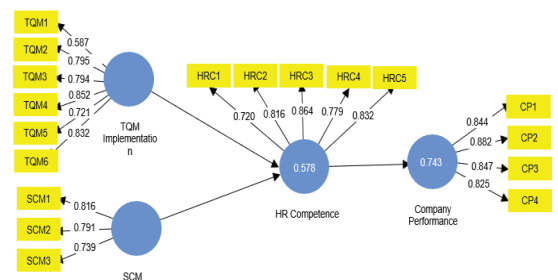


Fig. 2. Running Results

Table 1. Convergent Validity Test Results

Item	Loading Factor	Item	Loading Factor	Item	Loading Factor	Item	Loading Factor
CP <sub>1</sub>	0.844	HR <sub>C1</sub>	0.720	SC <sub>M1</sub>	0.816	TQ <sub>M1</sub>	0.587
CP <sub>2</sub>	0.882	HR <sub>C2</sub>	0.816	SC <sub>M2</sub>	0.791	TQ <sub>M2</sub>	0.795
CP <sub>3</sub>	0.847	HR <sub>C3</sub>	0.864	SC <sub>M3</sub>	0.739	TQ <sub>M3</sub>	0.794
CP <sub>4</sub>	0.825	HR <sub>C4</sub>	0.779			TQ <sub>M4</sub>	0.852
		HR <sub>C5</sub>	0.832			TQ <sub>M5</sub>	0.721
						TQ <sub>M6</sub>	0.832

Based on the table above, the loading factor value > 0.50, this means the indicator is valid. Reliability testing is to prove the accuracy, consistency and accuracy of the instrument in measuring the construct. If the AVE value

generated by all constructs with reflective indicators is > 0.5; cronbach's Alpha and D.G Rho values > 0.60.

**Table 2.** Cronbach's Alpha and Composite Reliability

Variabel	Cronbach's Alpha	Composte Reliability	AVE
Company Performance	0.900	0.923	0.667
HR Competence	0.920	0.934	0.590
Supply Chain Management	0.856	0.889	0.537
TQM Management	0.859	0.895	0.591

### 5.2 Inner Model

The structural model aims to predict the relationship between the hypothesized latent variables. By looking at the R-squares value of each endogenous latent variable as an interpretation of OLS Regression [28].

**Table 3.** R-Squares(R<sup>2</sup>)

Variable	R Square	R Square Adjusted
Company Performance	0.743	0.733
HR Competence	0.478	0.464

Based on the table above (table 3), it is obtained that R<sup>2</sup> for Company Performance is 0.743, this means that the company performance variable is influenced by 74.3% by TQM Implementation, HR Competence and Supply Chain Management variables, while 43% is influenced by other variables not included in the study. The value of R<sup>2</sup> HR Competence is 0.478, this means that the HR Competence variable is influenced by 47.8% by the TQM Implementation and Supply Chain Management variables. The remaining 52.2% is influenced by other variables not included in the study.

**Table 4.** Hypothesis test

	t-test	P Value	Description
TQM Implementation → Company Performance	3.798	0.000	Significant
Supply Chain Management → Company Performance	5.466	0.000	Significant
HR Competence → Company Performance	1.978	0.000	Significant

**Table 5.** Specific Indirect Effect

	t-test	P Value	Description
TQM Implementation → HR Competence → Company Performance	1.852	0.000	Significant
Supply Chain Management → HR Competence → Company Performance	1.861	0.000	Significant

Company Performance			
---------------------	--	--	--

### 5.3 Effect of TQM Implementation on Company Performance

Based on the results of the hypothesis test, there is a significant influence between the implementation of TQM on company performance, Total Quality Management is an approach that should be taken by the current organization to improve performance in order to remain able to compete. The quality of performance can be created if employees can do services correctly and be able to leave good impression on customers and reduce the number of mistakes, so employees need to get training and education in order to improve their skills to support the company's goals in improving the quality of performance.

The quality of company performance is able to read market situations in order to improve the company's financial performance. Because companies that provide quality products and services will get a reputation and decrease in demand elasticity that allows companies to set higher prices and get higher profits. Total Quality Management is an integrated management system designed to focus organizational resources on improving the quality of a company that satisfies customer needs with the aim of improving financial performance. Quality improvement is considered important in meeting customer needs because quality products or services will improve competition in competitive markets. Products or services that are higher quality make customers willing to pay relatively higher prices. Quality improvement also makes the company more effective and efficient in carrying out its business processes which results in a decrease in costs. The combination of price advantages, market share, and costs can create profitability and company growth that affect the company's financial performance..

[29] shows that TQM has a significant relationship with all Balance Scorecard perspectives. TQM has the highest correlation with an internal process perspective. This shows that TQM is an effective tool to improve the process in an organization. TQM can also improve learning and growth perspective. This study shows that the practice of TQM is very important to be improved in the SME business.

Other findings show that TQM acts as a positive mediator between Industry 4.0 and sustainability performance. The results will help management in the good decision making process when they have to decide to adopt the principle of TQM and I4.0 technology in their organization. In addition TQM offers useful information for industrial executives on how to secure the sustainability of their organization through TQM and i4.0. [30]

[31] TQM's moderate role in Finance-ESG. Fin-ESG emphasizes the conceptual contribution of operating management discipline. Quality management standards provide a clearer understanding of the impact of financial performance on the implementation of investment sustainability. The results show that there is

an interaction between tangible assets and intangible assets and its impact on ESG practices.

#### **5.4 The Influence of HR Competence on Company Performance**

The results of hypothesis testing show a positive effect between HR Competence and Company Performance. In line with research conducted by [32] which shows that HR competence has a positive effect on the performance of the Micro, Small and Medium Enterprises (MSMES) business. High levels of competency can affect employee performance. With the increase in employee performance, company performance will increase effectively. Many studies support this statement including the results of research from [33, 34].

In addition, [35] says that there is a factor of institutional pressure that significantly moderates the relationship between internal environmental management, and investment recovery and supply chain performance. It is therefore important for senior managers and mid-level managers to commit to and support SCM.

#### **5.5 Effect of Supply Chain Management on Company Performance**

Hypothesis test results show that there is a positive and significant effect on SCM on Company Performance. This research is in line with research conducted by [36], [37, 38] who concluded that supply chain management has a positive effect on company performance. In [39] concluded that by implementing supply chain management, companies can reduce environmental pollution and operational costs so that it will improve company performance.

#### **5.6 Effect of TQM with HR Competency as a mediating variable on Company Performance**

Hypothesis test results show that there is a positive and significant effect on SCM on Company Performance. This is supported by the results of research from [40] which revealed that ISO certified companies must provide quality awareness education to employees, train employees about how to use quality management methods and tools, collect quality data related to products provided by Suppliers, and measure customer satisfaction towards TQM, for that it requires HR competencies..

#### **5.7 Effect of Supply Chain Management on Company Performance with HRC as a mediating variable**

The results of the hypothesis test show that there is a positive and significant effect of the SCM variable on the Company Performance with HRC as a mediation variable. In line with the results of research [41] which said that at this time uncertainty and turbulence, almost every company is now exposed to supply chain

disorders including food and beverage companies. In such circumstances, supply chain managers must find the best way to build their supply chain resistance. The manager continues to look for methods to make their supply chains stronger than before to deal with the disorder.

## **6 Conclusion**

This is the era of VUCA (Volatility, Uncertainty, Complexity, and Ambiguity) , where changes occur very quickly, unexpectedly, influenced by many factors that are difficult to control, and truth and reality become very subjective. Almost every company will surely be faced with the challenge of supply chain disruption from upstream to downstream, as also happened in banana plantation companies where it must ensure the availability of fertilizers and chemicals as well as support for agricultural cultivation and ensure there are no obstacles in the distribution of fresh fruit to consumers. The results showed that there was a positive and significant influence between TQM on company performance, SCM on company performance. In addition, it is also proven that HR competencies affect the success of TQM and SCM implementation.

## **References**

- [1] X. Islami and M. T. Latkovikj, "There is time to be integrated: The relationship between SCM practices and organizational performance - The moderated role of competitive strategy," *Cogent Bus. Manag.*, vol. 9, p. 201030, 2022.
- [2] S. Kitchot, S. Siengthai, and V. Sukhotu, "The mediating effects of HRM practices on the relationship between SCM and SMEs firm performance in Thailand," *Supply Chain Manag. An Int. J.*, vol. 26, no. 1, pp. 87–101, 2020.
- [3] C. Zhang, M. R. A. Moreira, and P. S. A. Sousa, "A bibliometric view on the use of totalquality management in services," *Total Qual. Manag. Bus. Excell.*, vol. 32, no. 0, pp. 1466–1493, 2021.
- [4] W. Chao-Sen, "Application of TQM to road races: Study on the sports involvement and willingness to reparticipate," *Douliu City, Yunlin Cty. 640, Taiwan Cogent Bus. Manag.*, pp. 3–5, 2018.
- [5] T. A. V. N. A, D. Tuceka, and N. T. Pham, "Indicators for TQM 4.0 model: Delphi Method and Analytic Hierarchy Process (AHP) analysis," *Total Qual. Manag.*, 2022.
- [6] M. Sony, J. Antony, and J. A. Douglas, "Essential ingredients for the implementation of quality 4.0," *TQM Journal*, vol. 32, no. 4, pp. 779–793, 2020.
- [7] A. Chiarini and M. Kumar, "What is quality 4.0? An exploratory sequential mixed methods study of Italian manufacturing companies? An exploratory sequential mixed methods study of Italian manufacturing companies," *Int. J. Prod.*

- Res., 2021.
- [8] D. Kupper, C. Knizek, D. Ryeson, and N. Jan, "Quality 4.0 Takes More Than Technology," *Bost. Consult. Gr.*, 2019.
- [9] A. Fundin, J. Lilja, Y. Lagrosen, and B. Bergquist, "Quality 2030: Quality management for the future," *Total Qual. Manag. Bus. Excell.*, vol. 0, no. 0, pp. 1–17, 2020.
- [10] S. Sader, I. Husti, and M. Daróczy, "Industry 4.0 as a Key enabler toward successful implementation of Total quality management practices," *Period. Polytech. Soc. Manag. Sci.*, vol. 27, no. 2, pp. 131–140, 2019.
- [11] M. Glogovac, J. Ruso, and M. Maricic, "Iso 9004 maturity model for quality in industry 4.0," *Total Qual. Manag. Bus. Excell.*, pp. 1–19, 2020.
- [12] L. J. Krajewski, K. M. Malhotra, L. P. Ritzman. *Operations Management: Processes and Supply Chains*, 12th Edition, Pearson, 2019
- [13] G. R. Saputra, "Influence of Human Resource Competence, Internal Control System, Participation in Budget Preparation, and Accounting Control on Performance Accountability of Local Government Agencies Advances in Economics," *Bus. Manag. Res.*, vol. 201, 2021.
- [14] R. Waldan, "The Effect of Leader Support and Competence to the Organizational Commitments on Employees Performance of Human Resources Development Agency in West Kalimantan," *J. Ekon. Bisnis dan Kewirausahaan*, pp. 31–46, 2020.
- [15] M. Zwell, *Creating a Culture of Competence*. Wiley & Sons, Incorporated, 2000.
- [16] M. Abdirad and K. Krishnan, "Industry 4.0 in logistics and supply chain management: a systematic literature review," *Eng. Manag. J.*, vol. 33, no. 3, pp. 187–201, 2021.
- [17] O. Dumitrascu, M. Dumitrascu, and D. Dobrotă, "Performance evaluation for a sustainable supply chain management system in the automotive industry using artificial intelligence," *J. Process.*, vol. 8, no. 11, p. 1384, 2020.
- [18] P. Dhamija, M. Bedi, and M. L. Gupta, "Industry 4.0 and supply chain management: A methodological review," *Int. J. Bus. Anal.*, vol. 7, no. 1, pp. 1–23, 2020.
- [19] L. Ardito, A. M. Petruzzelli, U. Panniello, and A. C. Garavelli, "Towards Industry 4.0: Mapping digital technologies for supply chain management-marketing integration," *Bus. Process Manag. J.*, 2018.
- [20] A. Attia and I. Salama, "Knowledge management capability and supply chain management practices in the Saudi food industry," *Bus. Process Manag. J.*, 2018.
- [21] S. Li, B. Ragu-Nathan, T. S. Ragu-Nathan, and S. Subba Rao, "The Impact of Supply Chain Management Practise on Competitive Advantage and Organizational Performance," *J. Omega*, vol. 34, no. 1, pp. 107–124, 2006.
- [22] A. A. Ikhrum, "Penerapan Balanced Scorecard terhadap Peningkatan Kinerja Perusahaan (Studi Kasus pada Perusahaan Jasa Konstruksi)," *MANDAR Manag. Dev. Appl. Res. J.*, pp. 1–7, 2019.
- [23] I. T. Tomic, "An empirical study of employee loyalty, service quality, cost reduction and company performance," *Econ. Res. istraživanja*, pp. 827–846, 2018.
- [24] R. B. Carton, "Measuring Organizational Performance: An Exploratory Study.," *A Diss. Submitt. to Grad. Fac. Univ. Georg. Partial*, 2004.
- [25] W. Liu and K. Atuahene-Gima, "Enhancing product innovation performance in a dysfunctional competitive environment: The roles of competitive strategies and market-based assets," *Ind. Mark. Manag.*, vol. 73, pp. 7–20, 2018.
- [26] P.P. Tallon, et al., "Information technology and the search for organizational agility: A systematic review with future research possibilities," *J. Strateg. Inf. Syst.*, vol. 28, no. 2, pp. 218–237, 2018.
- [27] V. Naciti, "Corporate governance and board of directors: The effect of a board composition on firm sustainability performance," *J. Clean. Prod.*, vol. 237, p. 117727, 2019.
- [28] I. Ghozali, "Structural equation modeling metode alternatif dengan partial," 2014.
- [29] F. Ahmad, N. A. Hamid, A. N. Aizat, and M. N. Mohd, "The Impact of TQM on Business Performances Based on Balanced Scorecard in Malaysia SMEs," *Int. J. Qual. Res.*, vol. 16, no. 1, pp. 231–242, 2022.
- [30] P. Saha, Subrata, Belal, and Victoria, "Examining the role of TQM and Industry 4.0 on sustainability performance: an empirical study on Bangladesh's ready-made garment sector," 2022.
- [31] N. Chams, J. García-Blandón, and K. Hassan, "Role Reversal! Financial Performance as an Antecedent of ESG: The Moderating Effect of Total Quality Management," *Sustainability*, vol. 13, p. 7026, 2021.
- [32] Sampurnawatia and T. Agustina, "The Influence of HR Competence and Intellectual Capital on the Performance of MSMEs in Sasirangan Craftsmen," *Quant. Econ. Manag. Stud.*, vol. 2, no. 5, pp. 2722–6247, 2021.
- [33] Palahudin, Ismartaya, and J. D. Wetik, "Human Resource Competency and Organizational Climate on Employee Performance PDAM Tirta Pakuan Bogor City," *Manag. Stud. Entrep. J.*, vol. 2, no. 1, pp. 26–33, 2021.
- [34] I. Hajiali, A. M. F. Kessi, and Budhiandriani, "Determination of Work Motivation, Leadership Style, Employee Competence on Job Satisfaction and Employee Performance," *Golden Ratio Hum. Resour. Manag.*, vol. 2, no. 1, 2022.
- [35] N. Desire., "Effects of Green Supply Chain Adoption on the Performance of



- Agrimanufacturing Firms in Rwanda,” *A Thesis Submitt. Partial Fulfilment Requir. Degree Dr. Philos. Bus. Adm. (Procurement Supply Chain Manag. Jomo Kenyatta Univ. Agric. Technol.*, 2021.
- [36] Rachbini and Widarto, “Supply Chain Management dan Kinerja Perusahaan,” *J. Ris. Manaj. dan Bisnis*, vol. 1, no. 1, pp. 23–30, 2016.
- [37] Khalil, M. Khuram, Khalil, Rashid, Khan, and S. Nawaz, “A study on the effect of supply chain management practices on organizational performance with the mediating role of innovation in SMEs,” *Uncertain Supply Chain Manag.*, vol. 7, pp. 179–190, 2019.
- [38] M. Hashim, S. A. Baig, F. Amjad, M. Nazam, and M. U. Akram, “Impact of Supply Chain Management Practices on Organizational Performance and Moderating Role of Innovation Culture: A Case of Pakistan Textile Industry,” *Proc. Thirteen. Int. Conf. Manag. Sci. Eng. Manag.*, vol. 1002, pp. 390–401, 2020.
- [39] U. Mumtaz, Ali, Yousaf, Petrillo, and Antonella, “A linear regression approach to evaluate the green supply chain management impact on industrial organizational performance,” *Sci. Total Environ.*, vol. 624, pp. 162–169, 2018.
- [40] O. O. Cenk Budayana, “Roadmap for the implementation of total quality management (TQM) in ISO 9001-certified construction companies: Evidence from Turkey,” *Eng. J.*, vol. 13, no. 6, p. 101788, 2022.
- [41] G. Saeed, K. Bakhsh, and U. Ishfaq, “Effect of Human Resource Capabilities, Supply Chain Coordination, and Responsiveness on Supply Chain Resilience,” *Indian J. Econ. Bus.*, vol. 21, no. 1, 2022.