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INTEGRATED MANAGEMENT SYSTEM TO IMPROVE CORPORATE SUSTAINABILITY PERFORMANCE: A CASE STUDY IN THE PHARMACEUTICAL MANUFACTURING INDUSTRY INDONESIA

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ABSTRACT

This study aims to investigate the mediating factors of achieving quality, environmental and social performance concerning the sustainability of pharmaceutical manufacturing companies. Effective implementation of an integrated management system is essential in achieving business process performance to improve the company's sustainability performance. The priority of the pharmaceutical industry is to satisfy the requirements of quality assurance and product safety. Thus, a balance is required toward implementing an integrated management system. This research was conducted in one of the pharmaceutical manufacturing companies in Indonesia. Data were collected using questionnaires and interviews with respondents and analysed using generalised structural component analysis (GSCA). Results of this study show that

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implementing an integrated management system can improve social performance and corporate sustainability. The implications of this study indicate that the balanced implementation of the integrated management system has not been effectively achieved. Consequently, a strategy is required to evaluate the quality and environmental performance achievements and to improve the implementation of the integrated management system in a balanced manner.

Keywords: Environmental, integrated management system, quality, social, performance, sustainability.

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1. INTRODUCTION

Pharmaceutical manufacturing industries must satisfy high standards to ensure product quality and safety. Barriers to conducting quality audits, compliance checks and product recalls have become a focus of pharmaceutical industries due to the lack of globally regulated traceability system standards (Leal et al., 2021). Data obtained from various sources, such as machines, operators, equipment or similar manufacturers, are assumed to guarantee data quality (Leal et al., 2021). Critical aspects for maintaining product quality in pharmaceutical manufacturing encompass design, integrated operational processes and advanced control technology. Customer demand is driven by the advancement of product models through design optimisation and consideration of consumer needs, ensuring the delivery of consistently high-quality products (Ntamo et al., 2022). A chemical–technical approach is required in the manufacturing process of medicines to satisfy the required standards (Laky et al., 2023). High customer demands require prioritising flexibility. Changes in the current approach prioritise intelligent devices to interact with business processes in the pharmaceutical manufacturing industry (Ntamo et al., 2022). The company's sustainability is the manufacturing industry's competitive advantage (Pichagonakesit et al., 2023). The pharmaceutical manufacturing industry currently faces challenges in effectively implementing an integrated management system through the appropriate plan–do–check–act (PDCA) approach.

Pharmaceutical industry stakeholders demand a balance in product quality assurance policies, environmental, safety and health, as well as local, regional and global rule enforcement. Differences in stakeholder views, lack of integrated management systems, transparency and process efficiency can lead to non-technical problems (Khan et al., 2021). Stakeholder aspirations can be realised by strengthening organisational responsibility and communicating financial, social and environmental issues and perspectives (Mirzakhani et al., 2021). Stakeholders must satisfy environmental, social and governance requirements from an international perspective, encouraged by public institutions (Velte, 2021). Shareholders and stakeholders strive to maintain long-term relationships by strengthening business performance and reducing harmful environmental activities (Velte, 2021). Reliable financial and environmental reporting, organisational change strategies, ecological management awareness and compliance with revenue loss management are sustainable for investors and stakeholders (Velte, 2021). Some essential concepts including social aspects, such as corporate social responsibility for the health of stakeholders, employees and local communities, must be considered to achieve sustainability in the production process (Moslehpour et al., 2023). Problems of inadequate planning and operational management measure strategic management skills in manufacturing and affect relationships with external stakeholders, namely,

customers and suppliers (Moslehpour et al., 2023). Innovation is essential to winning the competition in company sustainability (Budiarto et al., 2023). The community acts as a partner committed to satisfying the requirements and regulations to support the sustainability of the company and the entire supply chain (Masood et al., 2023). The requirements of all stakeholders related to the environmental, quality, occupational health and safety management system are still not optimal; thus, an integrated management system is required to facilitate its implementation.

According to a review of prior research, an empirical study can demonstrate the impact of an integrated quality, environmental health and safety management system on achieving environmental, quality, social and corporate sustainability (CS) performance. Consequently, this study reviews pertinent literature to close the gaps by earlier research and offers empirical data based on real-world business facts. The study gaps include the following. Implementing an integrated management system in the pharmaceutical manufacturing industry has faced challenges in long-term consistency primarily because the focus tends to be on immediate customer requirements. The pharmaceutical manufacturing industry has not been optimal in implementing a quality, environmental, occupational safety and health management system. An integrated management system has not been a priority in the pharmaceutical manufacturing industry because the primary focus has been on satisfying requirements for quality assurance and product safety. The pharmaceutical manufacturing industry has not prioritised a balanced, integrated management system given the lack of intense demands from interested parties, resulting in suboptimal sustainability performance. An innovative process approach is required to implement an effective integrated management system in this industry.

Gaps on the research of pharmaceutical manufacturing industries are attributable to the lack of effective implementation of an integrated quality, environmental, occupational safety and health management system. Therefore, the benefits of implementing the management system have not been significantly evident in supporting the company's sustainability performance achievements. Strategic management must be applied as a fundamental theory to solve the aforementioned problems. The contribution of this research is to identify practical strategic steps for implementing an integrated management system to achieve the company's sustainability performance, mediated by improvements in quality, environmental and social performance.

2. LITERATURE REVIEW

The literature review identifies the relationship between implementing an integrated management system and achieving corporate sustainability performance as well as quality, environmental and social performance achievements. However, some pharmaceutical manufacturing industries have not implemented an integrated management system consistently because they focus on priority requirements for product quality assurance and safety. This condition impacts the balance that has not been achieved in the implementation of an integrated quality, environmental, occupational safety and health management system. This research identifies opportunities for improving the company's sustainability performance by implementing an effective integrated management system supported by quality, environmental and social performance achievements.

2.1. Integrated Management System and Corporate Sustainability

An integrated management system is a global requirement to expand pharmaceutical export market share and address the challenges posed by international competition. Three standards are commonly used for integrated management systems: quality, environment and sustainability management system standards (Pauliková et al., 2021). Artificial intelligence has a role in integrated management systems, and the Internet of Things is critical to sustainably improving performance to achieve the Industry 4.0 vision (Ajmi et al., 2022). Integrated management systems can be created to identify the risks of multiple management systems (Buganová et al., 2023). A systematic approach and integrated management system must be adopted to achieve optimal system implementation and increased daily operations. A health and safety management system must be introduced (Sarkheil, 2021). According to Sastry et al., (2020), customers require a third party to configure their infrastructure as per their requirements to satisfy their requirements. The management of requirement fulfilment is systematic, transparent and maintained to satisfy stakeholder demands and ensure organisational success (Pauliková et al., 2021). Previous researchers have shown that developing environmental innovations, such as improvements in manufacturing processes, new products, environmental performance, such as waste and pollution reduction, and cost savings can proactively create a competitive advantage (Moslehpour et al., 2023). The implementation of an integrated management system in the manufacturing industry has the potential to improve the company's sustainability performance.

Implementing a balanced and quality, environment-, safety- and health-integrated management system can improve a company's sustainability performance. In the context of empirical and conceptual research supported by previous studies, implementing IMS can potentially enhance business performance and raise the standard for applying better management systems to achieve CS performance. However, implementing a long-term process can lead to some inconsistencies (Gianni et al., 2015). Sustainability performance can be enhanced through technological innovations that allow access to unlimited customer segments and new markets (Kanda et al., 2021). The current demand for corporate responsibility is improving the environmental and sustainability performance due to resource scarcity, ecosystem degradation and labour exploitation (Khan et al., 2021). These changes in strategic organisational behaviour impact performance and sustainability (Klein et al., 2021). Achieving environmental performance poses systematic risks to companies and can, therefore, influence a company's financial risk; this phenomenon is of particular concern to investors (Landi et al., 2022). Industry data must be built to adjust the Industry 4.0 relationship and sustainability performance (Ghadge et al., 2022). A quality, environmental, occupational safety and health performance can improve the company's sustainability performance by satisfying the requirements of other interested parties and stringent product quality requirements.

Business organisations implementing integrated management systems and satisfying company sustainability principles can achieve their business goals by fulfilling stakeholder expectations and demands. The effectiveness of business operations can be measured by the industry's safety performance, including preventing accidents, injuries, loss of personnel and infrastructure and work area hazards (Sarkheil, 2021). Innovations toward sustainable business models can be considered when implementing business practices to improve sustainability performance (Curtis, 2020). Previous researchers have found a positive relationship between firm performance and enhanced competitiveness. Continued engagement fosters innovation in the industry and increases

competition as current business models change (Klein et al., 2021), expanding market and sales. Increased corporate profits and spending on sustainability are outcomes of sustainability performance. Achieving green business goals and practices requires advanced business understanding (Moslehpour et al., 2023). Significant changes are made in the balance of natural environmental and socio-economic systems to satisfy business requirements at the time (Sessa et al., 2021). The pharmaceutical manufacturing business is essential because interested parties on a global, regional and local scale can implement guidelines related to product quality (Haleem et al., 2015). This finding is confirmed by Gianni et al. (2017), who highlighted that to accomplish business objectives and satisfy the demands and expectations of interested parties, corporate organisations have adopted a great deal of management system integration and abide by the principles of corporate sustainability. Moreover, the triple bottom line (TBL) should incorporate all economic, social and environmental components into the current system in measuring the company's success (Maletič et al., 2015). Development and innovation methods in the application of quality control, environmental management and occupational safety and health can be implemented in a balanced manner in the pharmaceutical manufacturing industry.

On the basis of these theories, a framework can be developed to improve the company's sustainability performance by implementing an integrated management system, which is supported by the achievement of quality, environmental and social performance. Integrated management systems in the pharmaceutical manufacturing industry have not been consistently implemented because several priority requirements of mandatory customers and regulators are reported periodically. Gianni et al., (2015) suggested that implementing IMS is based on sustainability and is focused on integration audits and process performance evaluations, delivering the efficacy of implementing an integrated management system to achieve high performance. A company's reputation can be positively impacted by its complete dedication to considering the well-being of its customers (Luk et al., 2005). The pharmaceutical manufacturing industry still faces several obstacles in implementing an integrated management system that includes quality, environmental, occupational health and safety management systems. Several requirements, such as documentation control, purchasing process, process performance evaluation, internal audit and management review, can be integrated. To support the achievement of the company's sustainability performance, improvements in management programmes, leadership involvement and evaluation of integrated quality, environmental and occupational safety and health performance can be followed up with corrective actions in case of non-conformities or unmet targets, tested through internal audits.
This association leads to the formulation of the following hypothesis:

H1: Imposing IMS influences the development of the company's sustainability and overall performance.

A quality management system implemented consistently by the company's organisation can potentially improve the quality performance of business processes. Customer happiness can be raised by optimising internal factors, such as encouraging innovation and raising staff understanding of improving the calibre of goods and services. Increasing productivity and customer satisfaction boosts revenue, earnings and financial performance (Erwin et al., 2021; Luk et al., 2005; Maletic et al., 2016; Nurjannah et al., 2024; Rebelo et al., 2016; Simon et al., 2012; Tarí et al., 2010). Conducting several continuous improvement programmes for customer satisfaction regarding service and product quality impacts financial performance. The hypothesis

formulated from this relationship is as follows:

H2: The implementation of IMS affects the achievement of quality performance.

Environmental management control has not been a priority of the pharmaceutical manufacturing industry. Environmental requirements are limited to compliance with rules or regulations to avoid complaints from interested parties. According to specific research, attaining the performance of an environmental management system leads to reduced hazardous waste, increased recycled trash, and decreased natural resources, such as water and energy (Epstein et al., 2001; Erwin et al., 2021; Erwin et al., 2022; Maletic et al., 2015; Rebelo et al., 2016; Tarí et al., 2010). Some excellent programmes that improve environmental performance must be developed to save water and energy use, reduce hazardous and toxic waste and increase recycled waste. Primarily based on the relationship, the subsequent speculation is formulated:

H3: The implementation of IMS affects the fulfilment of overall environmental performance.

The fulfilment of requirements in implementing an occupational health and safety management system impacts aspects of resources, including facilities, infrastructure, finance and people. In addition, the pharmaceutical manufacturing industry still requires improvement. Knowledge from various related parties must be developed for continuous improvement, thereby providing a change of outlook for the organisation. Implementing a safety and health management system enhances the business image, employee training, employee happiness and occupational health and safety to achieve social performance in supporting company sustainability (Erwin et al., 2022; Luk et al., 2005; Maletic et al., 2016; Rebelo et al., 2016). Implementing the occupational safety management system and other requirements can be improved through support for occupational safety and health employee satisfaction. Moreover, increasing the latter's competence can improve the company's image. From this relationship, the following hypothesis is compiled:

H4: Implementation of IMS affects social performance enhancement.

Quality control of processes and products must be balanced by implementing an integrated management system; a balance that supports each other is required to fulfil the requirements. Increasing satisfactory performance, encompassing productiveness and process performance, to support organisational overall performance cannot be guaranteed via IMS implementation. Numerous factors, including business productivity, achievement of delivery times, increased customer satisfaction and decreased customer complaints are essential aspects, explaining the lack of impact or benefit from implementing a quality management system (Al-Gasawneh et al., 2023; Erwin et al., 2022; Hamidi et al., 2012; Santos et al., 2011). Process quality and efficiency achieved through management programmes and performance targets can potentially improve organisational competitiveness. Primarily based on the findings, the following speculation is formulated.

H5: Improved CS performance is prompted by enhanced quality performance.

Reducing adverse environmental impacts developed in the pharmaceutical manufacturing industry can provide opportunities for continuous improvement. Thus, implementing a balanced, integrated management system can contribute to achieving sustainable performance. Compared with other manufacturing industries, most pharmaceutical companies consider environmental concerns.

According to earlier research, integrated policies face challenges, such as the reliability of standards, the high cost and difficulty of implementing standards collectively rather than individually, operational changes due to system adjustments and organisational structure and corporate culture that present difficulty for future training programmes (Erwin et al., 2022; Santos et al., 2011). Environmental management is improved through effective environmental management programmes and the monitoring and evaluation of environmental control activities that positively impact the environment. On the basis of these findings, the following hypothesis is formulated:

H6: Enhanced CS is inspired by achievements in overall environmental performance.

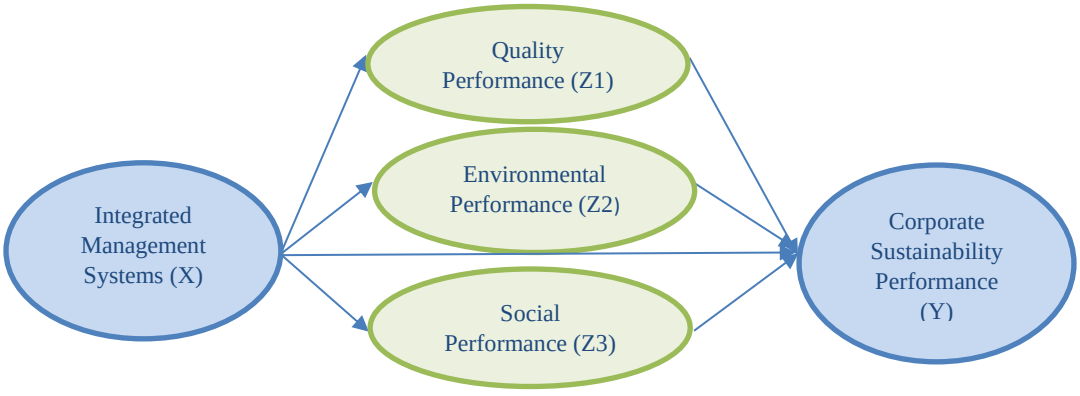
Social performance in the pharmaceutical manufacturing industry prioritises its relationship with marketing strategies to increase competitiveness. Occupational health control and protection gadgets do not affect the company's sustainability performance. The Occupational Health and Protection Control gadget does not affect the corporation's sustainability performance. Companies prioritising their customers' quality of life in the pharmaceutical sector are the only ones considered sustainable (Erwin, 2022; Erwin et al., 2021). Improving social performance through existing resources, including employees, all customers and interested parties, can potentially encourage improvements in the company's sustainability performance. Speculation is formulated from these findings as follows:

H7: Expanded CS's overall performance is prompted by the achievement of overall social performance.

2.2. Research Model Concept

The researchers created the following conceptual model to ascertain the effect of implementing an integrated management system on performance in terms of quality, the environment, society and business sustainability, as shown in (Figure 1.).

Figure 1: Integrated Management System Implementation Model for Improving the Company's Sustainability Performance



2.2.1. Implementation of IMS Variable

Indicators consisting of four points are formed into IMS implementation variables. In other words, completeness of integrated management program aspects (X1), completeness of internal aspects of integrated performance audit (X2), elements of integrated performance management evaluation (X3) and integrated nature of management involvement (X4).

2.2.2. Quality Performance Variable

Excellent overall performance variables are shaped using numerous indicators, which include customer pleasure (Z11), product and carrier excellence (Z12) and overall financial performance (Z13).

2.2.3. Environmental Performance Variable

Water use reduction rate (Z21), hazardous and toxic waste reduction rate (Z22) and energy consumption reduction rate (Z23) form the environmental performance variables.

2.2.4. Social Performance Variable

Indicators of improvement of occupational health and safety (Z31), level of employee competence (Z32) and improvement of the company's image (Z33) form social performance variables (Z3).

2.2.5. CS Performance Variable

The CS performance variable (Y) is shaped by three indicators, namely, the compliance degree (Y1), the extent of reduction of harmful environmental effects (Y2) and the level of competitiveness (Y3).

3. METHODOLOGY

3.1. Research Design

This research uses hypotheses explored from theoretical and empirical studies. Quantitative methods (positivism) and qualitative information were used for analysis. A sample of 25 organisational units was applied in one of the pharmaceutical manufacturing sectors in Indonesia. The company has implemented an integrated management system for over three years, and all respondents are department/organisational managers. Researchers conducted interviews assisted by filling out questionnaires to collect data, and respondents were asked to directly complete the questionnaires and qualitative information to strengthen the inclusion of research results.

3.2. Instrument

The questionnaire was compiled based on several ISO requirements, related standards and triple bottom line (TBL) principles (Maletic et al., 2015). The list of questions was developed and adapted to measure indicators of such complex variables. The measurement scale design refers to the Likert scale, where a score of 1 indicates the lowest assessment and 5 as the highest (Khalfallah et al., 2021). The three items evaluated by researchers referring to these measurements are the permanence of aspects, the level of achievement and the integrated nature of implementing an integrated management system.

The study of qualitative information obtained from in-depth interviews with researchers supports the current results. Case studies or action research can more deeply reveal opportunities for performance improvement (Mohapatra et al., 2018). In-depth interviews can yield objective information and evidence related to the company's sustainability achievements. Research instruments are tested to ensure their appropriateness and effectiveness. Content validation and advance validation are conducted to measure the validity of these instruments. This approach ensures that the contents of the questionnaire align with the research objectives, and advance validation confirms the relevance of decisions made by instrument users. Values ranging from 0 to 1 were confirmed to satisfy the validity requirements based on the validation test results. Reliability tests were carried out to provide confidence in the measurement results. Reliability testing was based on Cronbach's Alpha value of 0.836, which is a reliable instrument.

3.3. Data Collecting

Organisational units or departments in the company are considered the research objects. A total of 25 organisations were represented by department managers in interviews as respondents to provide valid information to provide an overview and sufficient information to be analysed in this study. Each unit represented by organisations in the pharmaceutical manufacturing industry that have implemented an integrated quality management system for more than three years is a source of data and information to be analysed in this study. Data sources from this study include primary data obtained directly from observations and interviews with related parties. The interview process conducted with several managers in an organisation can result from solid research on cases that occur in the industry (Dey et al., 2022). Secondary data verified during the interview provides an overview and narrative of the performance achievements of implementing the integrated management system.

3.4. Analysis Method

Structural equation modelling (SEM) is employed in this study's generalised structured component analysis (GeSCA) method to generate a fit model and test hypotheses. GSCA can be used for small sample numbers and rarely faces non-convergence. The small sample size can be interpreted by the GSCA method for further analysis to predict latent variables (Kim et al., 2017). Information on each step of the GeSCA-based evaluation method and the usage of GeSCA software are as follows: design structural models, design measurement models, construct path diagrams, convert path diagrams to systems of equations, predict parameters, measure goodness of fit and test hypotheses.

Convergent validity tests are carried out to ensure the value of the loading factor and average variance extracted (AVE), which has a value of more than 0.5. Details are shown in Table 1.

Table 1: Convergent Validity Test Results

Variable	Indicator	Loading Faktor	AVE
IMS implementation	X.1	0,8088	0,6309
	X.2	0,7390	
	X.3	0,8013	
	X.4	0,8252	
Quality Performance	Z1.1	0,8870	0,5364
	Z1.2	0,6616	
	Z1.3	0,6202	
Environmental Performance	Z2.1	0,8804	0,5880
	Z2.2	0,6367	
	Z2.4	0,7639	
Social Performance	Z3.1	0,7296	0,5249
	Z3.3	0,8683	
	Z3.4	0,5372	
CS Performance	Y.1	0,7677	0,5734
	Y.3	0,5172	
	Y.4	0,9291	

Examination of construct eligibility with Cronbach alpha of >0.7, which is considered reliable, as shown in Table 2.

Table 2: Reliability Measurement Results

Criterion	***Goodness of Fit Result***	***Cut-off Value***	**Model Evaluation**
FIT	0,4944	>0,5	Good enough
AFIT	0,4398	>0,5	Good enough
GFI	0,9864	>0,9	Good
SRMR	0,1636	Approach 0	Good

Table 4 shows that the two models fit and have satisfied the quality indices. Therefore, the model exhibits excellent performance and can be used to describe the system that has been studied for hypothesis testing. The R-square value is 0.808 or 80.8%. The combined contribution of the direct and indirect influence of variables X, Z1, Z2 and Z3 to variable Y is 80.8%, whereas the remaining 19.2% represents the influence of other variables on the difference.

4. FINDING

The study analysis yields the most significant indicators for creating a construct variable. These indicators are specified as configuration variables. Based on the highest load factor value, the mean values that represent the respondents' perceptions of the survey indicators are also included for comparison. Table 4 indicates that every sign measuring the variables produces loading factor values and AVE greater than 0.5. Consequently, all these indicators for measuring variables are declared valid.

Table 3. Profile of Research Variables in terms of the Relationship Value of the Loading Factor and the Mean

Variable	Loading Factor	Mean
IMS Implementation Variable (X)		
Aspects of a complete integrated management program (X1)	0,8088	4,00
Aspects of integrated performance audits are carried out thoroughly (X2)	0,7390	3,96
Integrated management review performance is implemented completely (X3)	0,8013	4,00
Management commitment and involvement (X4)	0,8252*	4,28*
Quality Performance Variable (Z1)		
Customer satisfaction level (Z11)	0,8870*	4,52
Product and service quality level (Z12)	0,6616	4,64*
Level of achievement of financial performance (Z13)	0,6202	4,16
Environmental Performance Variable (Z2)		
Water use reduction rate (Z21)	0,8804*	3,80
Hazardous and Toxic waste reduction rate (Z22)	0,6367	3,64
Energy consumption reduction rate (Z24)	0,7639	3,92*
Social Performance Variable (Z3)		
Improvement of occupational health and safety (Z31)	0,7296	4,24
Employee competency level (Z33)	0,8683*	4,20
Corporate image enhancement (Z34)	0,5372	4,52*
Variable Performance CS (Y)		
Compliance level (Y1)	0,7677	4,56*
Reduction rate of adverse environmental impacts (Y3)	0,5172	4,32
Competitiveness level (Y4)	0,9291*	4,00

Hypothesis testing was carried out using GeSCA analysis, and the results are presented in the following table.

Table 4: Hypothesis Testing Results

Hypothesis	Path Coefficient	S . E	C. R	Note
H1: Implementation of IMS →CS Performance	−0,1942	0,3492	−0,556	Insignificant
H2: Implementation of IMS → Quality Performance	−0,673	0,0777	−8,662*	Insignificant
H3: Implementation of IMS →Environmental Performance	0,1607	0,169444	0,948	Insignificant
H4: Implementation of IMS → Social Performance	0,3484	0,2311	1,508	Insignificant
H5: Quality Performance→ CS Performance	0,0182	0,3366	0,054	Insignificant
H6: Environment Performance→ CS Performance	0,1249	0,2693	0,464	Insignificant
H7: social performance→ CS Performance	0,8043	0,1887	4,262*	Significant

***P* = 0.05**

Manager's perception of variable indicators on four variables, namely, integrated management system implementation, performance of quality, environmental and social and corporate sustainability performance (KP), explaining that the variable "implementation of an integrated management system (QMS)" has a factor weight, with the highest average attributed to management commitment. The quality performance variable has a factor weight, with the highest average attributed to customer satisfaction. The environmental performance variables have factor weights, with the highest average attributed to the reduction in water use. The social performance variables also have factor weights, with the highest average attributed to the level of employee competence. In addition, the variable of corporate sustainability performance has factor weighting, with the highest average attributed to competitiveness.

5. DISCUSSION

The success of quality, environmental and social performance has not contributed to the organisation's sustainability in enforcing an included control device. The role of integrated internal audit has not become the organisation's focus because more process audit activities are required to satisfy product quality and safety. While auditing the occupational health, safety and environmental management system has not become the organisation's top priority. The competence of auditors in quality aspects is better than in ecological, health and safety aspects. The frequency of quality audits is on a monthly basis. By contrast, environmental, health and safety audits are carried out once a year; thus, the depth of the auditor's competency in terms of quality

is significant. The pharmaceutical industry deals with first-rate products, protection and regulatory requirements associated with exceptional and safe products (Erwin et al., 2022).

The company's sustainability performance has not been improved despite achieving quality outcome. Over the last three years, productivity targets have not been met, leading to subpar financial performance. In addition, a new cost-saving programme was launched in 2020 to create awareness of the need to improve business process efficiency. Implementing IMS has not benefited the company (Hamidi et al., 2012). The attainment of environmental performance has not translated into improved sustainability performance despite the company's best efforts to reduce the amount of hazardous and toxic waste. Limiting the usage of hazardous and poisonous compounds remains challenging because employee awareness and laboratory testing in the pharmaceutical manufacturing sector are still necessary for the reduction. Hazardous and toxic wastes are separated, and no employee ideas or innovation programmes exist. These impacts did not reach the level of reduction in harmful environmental effects that would support the company's sustainability performance. This result aligns with research finding of Santos et al. (2011), asserting that employees' awareness of contributing to the implementation of environmental management system is still lacking. The pharmaceutical production enterprise continues to pursue enhancing the agency's image by acquiring certificates from the government or interested parties. Examples of these certificates include ISO 9001, ISO 14001, ISO 45001 and good drug manufacturing practice certificates. Social performance achievements strongly influence the company's sustainability performance.

The implications of this study reveal a relationship between the achievement of social performance and corporate sustainability. This finding supports sustainable development goals and business ethics programmes to promote good public health, community welfare and environmental protection. Quality performance is achieved through a management system that has not been integrated. This condition proves that the implementation of an integrated management system does not have to be balanced amongst environmental, quality, occupational safety and health management systems, especially in the pharmaceutical manufacturing industry, which prioritises the implementation of special requirements to ensure quality, product safety and business ethics. The equilibrium in integrated management system implementation is directly related to the resources allocated by the organisation, and the effectiveness of this implementation is assessed based on stakeholder satisfaction (Gianni, M. et al., 2017). The company's reputation and competitiveness are enhanced when these requirements are fulfilled, thereby supporting the achievement of its sustainability performance. The main focus of the pharmaceutical manufacturing industry is to implement an integrated management system by prioritising aspects of quality, product safety and business ethics that influence the integration of occupational safety, environmental and health aspects.

Inconsistent long-term implementation of integrated management systems can be resolved by increasing the frequency of internal audits and the competency of internal auditors. Employee awareness must be strengthened when implementing integrated management systems, especially the employees' contributions to environmental management, apart from ensuring customers' quality of life. Stakeholder compliance and requirements entail regular monitoring of performance through internal audit activities and management reviews. Programmes aimed at implementing integrated management systems and reducing the use of waste, hazardous and toxic substances enhance employee productivity and reduce costs, as well as increase employee awareness of the

efficiency of production processes. These efforts collectively contribute to fostering a balanced development approach.

6. CONCLUSION

The findings demonstrate the necessary influence and connection between implementing an integrated management system and attaining social performance, thereby enhancing the sustainability performance of the pharmaceutical manufacturing sector. This sector exemplifies this connection by consistently working to build and improve its business image through obtaining government certifications and satisfying customer or interested party requirements. The company's sustainability performance has not improved due to the balance of developing an integrated management system, nor has it enhanced environmental or quality performance. The pharmaceutical manufacturing zone prioritises the company image to satisfy the mandatory desires of involved parties in assuring product first-rate and protection to reinforce competitiveness, thereby sustaining improvements in enhancing the health and well-being of individuals. This study focuses only on the department manager's role in one of Indonesia's pharmaceutical manufacturing businesses. As a result, extrapolating the findings to the pharmaceutical manufacturing sector is impossible in general.

The pharmaceutical manufacturing industry is unique in achieving corporate sustainability performance by implementing an integrated management system. In implementing this system, the pharmaceutical manufacturing industry puts forward specific requirements for quality, product safety, business ethics, environmental, occupational safety and health. The company's sustainability performance has not been achieved in the long term due to the implementation of an integrated management system that lacks balance. Implementing a well-balanced environmental, quality, occupational safety and health management system has the potential to decrease the achievement of quality performance because the resource management in the pharmaceutical industry prioritises implementing quality management systems, such as management commitment, programmes, internal audits and reviews that focus on quality aspects. This finding assumes that the environmental, health and safety aspects are applied in a balanced manner. Thus, the focus of resource management becomes divided, potentially leading to suboptimal and ineffective application of quality aspects.

The achievement of social performance contributes to the company's sustainability performance and supports the sustainable development goal programme in improving good health and community welfare. The pharmaceutical manufacturing industry can create a corporate image and competitiveness by prioritising the fulfilment of specific requirements to ensure quality, product safety and business ethics. However, the role of quality, environmental and social performance has not impacted the company's sustainability performance. It is influenced by external factors and internal resources that have not supported the implementation of an unbalanced quality, environmental, occupational health and safety management system in the pharmaceutical manufacturing industry.

Empirical findings from this study prove that the pharmaceutical manufacturing industry prioritises product quality and safety for customers. Therefore, implementing an integrated management system does not have to be balanced amongst environmental, quality, occupational safety and health management systems. Achieving social performance can improve corporate

sustainability because organisations and interested parties prioritise fulfilling mandatory requirements to improve corporate image and competitiveness in the pharmaceutical manufacturing industry.

6.1. Limitations and Future Studies

This research was conducted with limited sample and analysis units in one pharmaceutical manufacturing industry. For future research, the sample and analysis units must comprise several pharmaceutical manufacturing industries implementing integrated management systems. Further quantitative or empirical research on the benefits of organisations that have implemented an integrated management system for more than three years is required to assess the contribution of an integrated management system to achieve the company's sustainability performance. Considering the variables of external and internal factors, as well as the determination of long-term organisational goals and objectives, the mediating role of the ability to integrate business strategies and policies, organisational culture and the capacity to collaborate with external parties as a counterbalance to the relationship between integrated management system implementation to the achievement of corporate sustainability performance.

The pharmaceutical manufacturing industry fulfils the minimum requirements of interested parties in environmental management, occupational safety and health. Further research can be carried out on the pharmaceutical manufacturing industry that seeks to improve the fulfilment of requirements that exceed minimum standards. The qualitative information provided by informants, including supervisors and employees, regarding health promotion programmes, enhancing auditor competence and raising employee awareness in environmental management, especially the use of environmentally friendly products, and in managing hazards and risks from occupational safety and health, must be further examined.

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