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# Economic management innovation: Sustainable economic strategy to face trade tariffs and global economic challenges

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## *ABSTRACT*

The lack of innovative development in economic management as a sustainable strategy has a negative impact on the wider community. In facing increasingly complex global challenges, such as uncertainty in trade tariffs and climate change, society and entrepreneurs must collaborate to overcome them. It is urgent to conduct research to study these issues because of the negative impact of fraudulent practices that harm consumers, and there is a need for policy reform to improve public protection. Therefore, the purpose of this study is to analyze innovative strategies in economic management to increase company competitiveness and contribute to achieving national and international sustainable development goals. The research approach used was a combination of quantitative surveys, interviews, and qualitative observations. The sample consisted of 357 participants selected through purposive sampling from small and large companies in Surabaya. Data collection techniques included instruments, in-depth interviews, and direct observations. Analysis was performed using descriptive statistics with the help of SPSS Version 29.0. The results showed that public-private sector collaboration in implementing sustainable practices can increase economic efficiency, reduce unemployment rates, and lower carbon emissions. The conclusion is that innovation in economic management, continuously developed by companies in Surabaya, can achieve significant and sustainable economic growth. Practical implications for policymakers include formulating policies that support sustainable investment in Surabaya, thereby supporting the local, national, and global economy.

**Contribution/Originality:** This study analyzes and evaluates sustainable economic innovations in the Surabaya area that have national and global impacts and support the local community economy. By paying attention to innovations carried out by small, medium, and large companies, and reducing poverty and unemployment by increasing sustainable economics in the area.

## 1. INTRODUCTION

Economic developments in the 21st century, driven by globalization and rapid technological advancements across various countries, have led to increasingly complex economic challenges. The unclear and rising trade tariffs imposed by the United States, China, and other developed countries further complicate the situation for developing nations, making these challenges more difficult to control (Drabek, 2024; Tereshchenko, Salmela, Melkko, Phang, & Happonen, 2024). In 2023, the World Bank recorded that global economic growth would reach an increase of 2.9%. This is a decrease compared to 2019 during COVID-19, when economic growth reached 3.5% (Barkat, Mimouni,

Alsamara, & Mrabet, 2024; Takyi, Dramani, Akosah, & Aawaar, 2023). In facing this challenge, there needs to be a special strategy for improving the economy in the region, nationally, and globally (Khorram-Manesh, Goniewicz, & Burkle Jr, 2024). An innovative and sustainable economic strategy to overcome challenges from developed countries and globally (Uwuigbe et al., 2025). In addition to uncertain tariffs from developed countries, the challenge of climate change is also significant, with estimates in 2022 indicating that without substantial mitigation efforts, global temperatures could rise by 1.5°C within the next two decades, impacting people's economic productivity, food security, and social lives, as trade tariffs become increasingly unclear (Abdullahi, Kalengyo, & Warsame, 2024; Hasan et al., 2024). In producing an innovative economy, economic management is needed that can be the key to the birth of a strategy that not only focuses on the economic growth of the people in the region but also creates an economy that is sustainable with the environment and society in a country and globally (Qenaat et al., 2025). According to the World Economic Forum (WEF) 2023 report, companies that implement sustainable practices in their operations can increase competitiveness by up to 20% compared to companies that do not implement sustainable practices (Karadayı, Yazıcı, & Akdemir Ömür, 2025; Sobko, Gavkalova, Kurbatska, Boichyk, & Krysovatyy, 2024). In improving the innovative economy, an innovative approach is needed. Approaches such as the circular economy and the use of green technology are becoming more beneficial for local communities (Barbhuiya, Kanavaris, Das, & Idrees, 2024). The Ellen MacArthur Foundation's 2023 report shows that implementing a circular economy will reduce global carbon emissions by 45% by 2030 (Uwuigbe et al., 2025). However, to achieve this goal, there must be cooperation between the public and private sectors in developing policies that support innovation and sustainable investment (Zhang, 2024). According to the McKinsey Global Institute, investment in green technology is expected to reach $9 trillion by 2030, including renewable energy, energy efficiency, and sustainable transportation (Ramolobe & Khandanisa, 2024). Although the challenges in implementing innovation in economic management must also be considered, according to the OECD report, around 40% of MSMEs in developing countries face difficulties in obtaining sustainable economic financing (Dambiski Gomes de Carvalho, Resende, Pontes, Gomes de Carvalho, & Mendes Betim, 2021).

The rapid economic development is a challenge for the people of Surabaya. The economic challenges faced by cities and developing countries are becoming increasingly complex because they are not supported by the global market (Amin, Hasyim, Sun'an, Hilman, & Fahmiasari, 2024; Sudaryana, Wirjodirdjo, & Windrarto, 2025). So, this research needs to answer questions to explore innovative and sustainable solutions in economic governance in cities, countries, and globally. One question is how can innovation strategies in economic governance be applied to address the challenges posed by uncertain economic trade tariffs and climate change globally? Given that global economic growth is expected to reach 2.9% in 2023, much lower than before the COVID-19 pandemic, it is important to investigate the impact of these conditions on various economic sectors in 2025 and beyond. Another question is how can the implementation of sustainable practices improve the competitiveness of companies, and to what extent does this impact economic productivity and food security at the national and regional levels? In addition, research should explore public-private sector collaboration in developing policies that support innovation and sustainable investment (Caloffi, Pryke, Sedita, & Siemiatycki, 2017; Fleta-Asín & Muñoz, 2024). Given that around 40% of micro, small, and medium enterprises in developing countries face constraints on business financing for a sustainable economy, the question of what can be done to facilitate this access is important.

This research is important to conduct by examining the increasingly complex and diverse global economic developments that are pressing against each other (Afjal, 2023). Innovative strategies in economic management are important for business actors to understand in order to face difficulties and challenges such as climate change and uncertainty in trade tariffs, which impact the economic growth of cities, countries, and globally, thereby causing social inequality (Salifu & Salifu, 2024; Usman, Yang, & Nasir, 2024). By adopting sustainable strategies, organizations and governments can find solutions to increase economic efficiency in the social and environmental aspects of society (Wu & Tham, 2023). For example, the use of environmentally friendly technology in the production process can reduce

the carbon footprint while increasing the competitiveness of companies (Ferrazzi, Frecassetti, Bilancia, & Portioli-Staudacher, 2025). The focus of this research is on how administrative innovation can contribute to fostering cooperation between the public and private sectors in various cities and countries to achieve the Sustainable Economic Development Goals at both national and international levels. By identifying best practices and innovative models applied in different countries, this research impacts policy and business, helping to formulate more effective policies in the future. It also plays an important role in education and training, preparing the workforce to face changes in global economic policies. The results of this research are not only for the people of Surabaya but also for national and global communities, serving as encouragement for the government to formulate policies, build a more resilient and sustainable Indonesian economy, and create a positive impact on the world community.

The urgency and novelty of this research on innovation in economic management, as a sustainable strategy to overcome global economic challenges. Economic development and challenges from increasingly complex developed countries have a negative impact on the economy of the wider community and the increase in unemployment. It is hoped that, with the inadequate traditional approach to economic management, companies can produce new innovations. Previous research has shown that innovation in economic management, including the development of new business models, the use of digital technology, and the implementation of sustainable practices, can provide effective solutions to overcome various problems such as climate change, social inequality, and economic crises (Goniewicz, Burkle, & Khorram-Manesh, 2024). In line with other studies, it shows that partnerships between government, the private sector, and civil society can create synergies that encourage innovation in the implementation of sustainable economic practices (Almeida, 2024; Leal Filho et al., 2024). In addition, the use of big data and analytics allows companies to make more informed decisions in determining global market needs (Hassan et al., 2024; Thayyib et al., 2023). Innovations that must be developed in economic management should also focus on social values, with companies not only prioritizing financial profits but also paying attention to the social and environmental impacts of their work (Zhang & Hao, 2024). Need to integrate the principles of economic strategy into business, corporate organizations can improve their competitiveness in the increasingly competitive global market. With the hope that companies can implement sustainability with healthy economic competitiveness, and this can face uncertain economic trade tariffs and the impact of climate change. This study also analyzes how the public and private sectors can collaborate to develop policies that support innovation and sustainable investment, and what difficulties are faced in accessing finance by micro, small, and medium entrepreneurs in developing countries to implement sustainable projects.

The general objective of this study is to analyze and explore innovation in economic management as a sustainable strategy for facing increasingly difficult global economic challenges. In general, the global economy and climate change require companies and organizations to adopt management practices that focus not only on short-term profitability but also on the long-term economic sustainability of companies and communities. Therefore, the specific objectives of this study are to identify innovative methods and practices in economic management that can improve resource efficiency, reduce environmental impacts, and increase competitiveness in the global market. Another objective of this study is to analyze the role of technology and digitalization in driving innovation in sustainable economic management.

## 2. LITERATURE REVIEW

### *2.1. Economic Management*

Economic management theory is a combination of science that includes business principles and management techniques for achieving company and business actor goals and assisting in making organizational development decisions (Losada-Agudelo & Souyris, 2024). In today's technological developments, economic theory is becoming more practical and is developing along with market complexity and the dynamics of global business change (Odonkor, Kaggwa, Uwaoma, & Farayola, 2024). The current popular theory in economic management is the

application of cost-benefit analysis (Vagdatli & Petroutsatou, 2023). This theory is not limited to the financial aspect of the economy but also includes the social and community environment. For example, when a company considers investing in environmentally friendly technology, management must evaluate the initial costs incurred as well as the benefits obtained by society and the environment. In determining how effective economic management is, it is important to understand consumer behavior and how to integrate it into economic and business strategies (Awalluddin & Maznorbalia, 2014). Economic management theory has also been transformed in the development of 21st-century technology (Bhuiyan et al., 2024). Today's economic management makes extensive use of big data and analyzes data in decision making (Aldossari, Mokhtar, & Abdul Ghani, 2023). Business actors who can analyze data have a significant competitive advantage in society (Alghamdi & Agag, 2024; Ragazou, Passas, Garefalakis, & Zopounidis, 2023). With productive analysis, management can predict the rise and fall of market trends and consumer behavior, enabling them to plan more effective and innovative strategies (Basu, Lim, Kumar, & Kumar, 2023). In order to maintain the company's economic position so that it remains stable, economic management must continue to innovate and adapt to the latest technology to maintain its position (Bhuiyan, 2024). In the theory of economic management, it also emphasizes the importance of risk management that must be taken (Ciocoiu, Radu, Colesca, & Prioteasa, 2024). In the global economy, economic risks can arise due to various factors such as currency fluctuations, changes in domestic government policies, and foreign political uncertainty (Iriani, Agustianti, Sucianti, Rahman, & Putera, 2024). In his portfolio theory, investment diversification is the key to reducing risk (López-Penabad, Iglesias-Casal, Maside-Sanfiz, & Larbi, 2025). The theory of economic management has principles that apply to this day and can be used in investment management and serve as a foundation for strategic decision-making in companies (Alkaraan & Northcott, 2006). Economic management theory also includes behavioral approaches to decision making (Amiri, Jafarian, & Abdi, 2024). Decision making does not always have to be rational, but can be influenced by cognitive bias (Acciarini, Brunetta, & Boccardelli, 2021). Research shows how individuals make decisions under conditions of uncertainty (Appel, Krasko, Luhmann, & Gerlach, 2024). Understanding bias can help management formulate better strategies and avoid decision-making errors.

### *2.2. Sustainable Economic Strategy*

In theory, sustainable economic strategy is an important approach in global technological terms, where environmental, social, and societal challenges are pressing, expecting innovation (Adanma & Ogunbiyi, 2024). This paradigm focuses on the integration of local economic growth, environmental economic sustainability, and global social welfare (Setyadi, Soekotjo, Lestari, Pawirosumarto, & Damaris, 2025). The theory that is appropriate in this case is the Triple Bottom Line (TBL) theory put forward by Elkington (1994) and Sánchez-Chaparro, Soler-Vicén, and Gómez-Frías (2022). This theory emphasizes that companies do not only pursue profits but also take into account the economic, social and environmental impacts of the company and society (Rosário & Figueiredo, 2024). In practice, a sustainable economic strategy supports companies in adopting a more holistic business model, where long-term goals are based on financial performance, but also include environmental sustainability and social responsibility (Munteanu, Ionescu-Feleagă, & Ionescu, 2024). The implementation of a circular economy is also one of the newest approaches to a sustainable economic strategy (Negrete-Cardoso et al., 2022). The circular economy theory aims to reduce waste and maximize the use of resources by companies by designing more efficient products and environmentally friendly production processes by companies (Henriques, Figueiredo, & Nunes, 2023). Companies are encouraged to create systems that allow products to be recycled, thereby reducing dependence on finite natural resources (Bianchi & Cordella, 2023). The transformation adopted from a sustainable economic strategy often generates new opportunities in the development of innovative products for the market (Agrawal et al., 2024). Basically, social and economic factors can support each other because companies can create competitive advantages through sustainable innovation in the community environment (Lu & Shaharudin, 2024). Investors investing in

environmentally friendly technologies not only meet the demands of increasingly environmentally conscious consumers but can also reduce operational costs in the long run (Ogunmola & Kumar, 2024).

### *2.3. Global Economic Challenges*

The most obvious challenge for the global economy is how to recover unevenly across countries and the increasing competition on trade tariffs (Barrie & Schröder, 2022). According to the World Bank, several developing countries have shown rapid economic recovery, but many are still struggling to overcome the long-term impacts of the pandemic and the increasingly stringent trade war (Romero, Mesa, Minoli, & Aristizabal, 2025). Weak infrastructure to support health and reliance on hard-hit private sectors such as tourism and hospitality create new problems (Nicola et al., 2020). Inflation can also have a global impact, as trade tariffs become an increasingly pressing issue to resolve (Diaz, Cunado, & de Gracia, 2024). IMF data shows that inflation in many countries has reached its highest levels in recent years, driven by rising energy prices and supply chain disruptions across various nations (Diaz et al., 2024). Price increases not only affect consumer purchasing power but can also undermine social stability, especially in countries with high unemployment and low incomes (Ferreira, Abreu, & Louçã, 2025). Climate change is also a major challenge that can affect the global economy. In the Intergovernmental Panel on Climate Change (IPCC) report, the impacts of climate change, such as extreme weather events, rising sea levels, and declining agricultural productivity in communities, can threaten food security and water resources in many regions of Indonesia and the world (Misra, 2014). Governments must support communities and invest in green technologies and infrastructure sustainably, which often requires high initial costs (Islam, 2023). Geopolitical tensions, particularly between major economies such as the United States and China, also contribute to global economic uncertainty (Li, Ren, & Wang, 2024). In the Council on Foreign Relations (CFR), trade disputes and economic sanctions can disrupt international trade and slow global economic growth. The uncertainty of trade wars makes investors afraid to invest and this hinders innovation and economic growth (Smorodinskaya & Katukov, 2024). Accelerated digital transformation during the pandemic has created new challenges for the global workforce. Many traditional jobs are threatened by digitalization, requiring workers to acquire new skills in technology (Barbhuiya et al., 2024). According to the World Economic Forum, 85 million jobs will be lost, but 97 million new jobs will be created, requiring better training and education programs to prepare the future workforce for technological skills (Krishna, 2024).

## 3. DATA AND METHODOLOGY

### *3.1. Research Design*

The design of this study aims to analyze and explore how innovation in economic management across various strategies is sustainable, and how to overcome the challenges of global economic conflicts, especially those related to climate change and economic uncertainty. To address this, the research method used is mixed research, combining quantitative survey methods and qualitative methods such as observation, interviews, and collection of documentary evidence (Geremew, Huang, & Hung, 2024). This study selects companies that have implemented sustainable economic innovation practices in both the public and private sectors.

### *3.2. Participants and Sample Size*

The research participants consisted of individuals from companies and the public and private sectors in Surabaya, with a sample size of 357 people. The sampling method used was purposive sampling, where participants were selected based on specific characteristics relevant to the research objectives, namely companies that have implemented sustainable practices in their operations, both in the public and private sectors. Respondents included stakeholders from the public and private sectors, such as managers, entrepreneurs, and members of organizations concerned with sustainable practices and innovation in economic management. Of the 357 respondents asked to evaluate the survey, 50 individuals from small and large companies were directly observed to gain a deeper understanding of the

implementation of economic management practices. This direct observation aimed to understand the interaction dynamics and the implementation of innovations by organizations, as well as the challenges they face in adopting sustainable strategies. Additionally, 80 people were interviewed to explore their perceptions and experiences related to innovation in economic management, sustainability, and public-private collaboration.

### *3.3. Measure Instruments*

This research will also highlight the importance of collaboration between the public, private, and civil society sectors in creating synergies that support innovation and sustainable investment. In the context of the employment crisis caused by automation, this research will also explore the need for better training and education programs to prepare the workforce for these changes. By reviewing best practices from various countries that have successfully implemented innovation in economic management, it is hoped that this research can provide input and reference sources for policymakers and business actors in Indonesia. The following outlines the research flow in identifying innovation in economic management and strategies to address national and global economic challenges.


**Figure 1**. Sustainable economic management innovation in facing global economic challenges.

Figure 1 illustrates innovation in sustainable economic management in addressing global economic challenges. Key strategies include implementing policies and innovations that support sustainable development, with a focus on the use of green technologies to reduce environmental impacts and increase efficiency. Employee involvement is also important, as their participation can contribute to the successful implementation of these innovations. In addition, collaboration with external stakeholders, such as other companies, government agencies, and local communities, plays a critical role in enhancing effectiveness and innovation. Performance measurement and evaluation are essential components to monitor the economic and social impacts of actions taken. Overall, this approach emphasizes sustainability and collaboration as the main foundations for addressing global economic challenges in an innovative and sustainable manner.

**Table 1**. Instruments in surveys, observations, interviews and document searches.

| No. | Indicators. | Instrument | Items |
|---|---|---|---|
| 1 | Sustainable innovation policy and strategy. | The company has a strategy document for sustainable innovation. | 4 |
| | | The company reviews the policy. | 4 |
| | | Management emphasizes the importance of sustainable innovation in internal meetings. | 4 |
| | | A concrete action plan for implementing the sustainable innovation policy. | 4 |
| | | The strategy is communicated to all employees. | 4 |
| 2 | Employee participation. | Employees are involved in the process of developing sustainable innovation. | 5 |
| | | The company conducts sustainability training for employees. | 5 |
| | | Employees provide input on sustainability practices. | 5 |
| | | The company provides incentives for employees who contribute to sustainable innovation. | 5 |
| | | Employee awareness of the importance of sustainability. | 5 |
| 3 | Use of green technology. | The company uses environmentally friendly technologies in its production. | 5 |
| | | The company invests in new green technologies. | 5 |
| | | The company evaluates the environmental impact of the technologies used. | 5 |
| | | Programs to promote the use of environmentally friendly technologies throughout the organization. | 5 |
| | | Effective use of green technologies in reducing the company's carbon emissions. | 5 |
| 4 | Collaboration with external parties. | The company partners with academic institutions to drive sustainable innovation. | 5 |
| | | The company collaborates with government agencies on sustainable projects. | 5 |
| | | The company is involved in industry associations that focus on sustainability. | 5 |
| | | The company has a partnership program with non-profit organizations for sustainable projects. | 5 |
| | | These collaborations are effective in producing sustainable innovation. | 5 |
| 5 | Performance measurement and evaluation. | The company has performance indicators to measure the success of sustainable innovation. | 5 |
| | | The company evaluates the social impact of sustainable practices. | 5 |
| | | The annual sustainability report includes data on innovation performance. | 5 |
| | | Transition from evaluation data to follow-up improvements in the company. | 5 |
| | | A special team responsible for measuring performance in sustainable innovation. | 5 |
| 6 | Economic and social impact | The company has assessed the impact of sustainable innovation on profitability. | 5 |
| | | Contribution of sustainable innovation to the company's market share. | 5 |
| | | Research to evaluate the social impact of implemented innovation. | 5 |
| | | The extent of the influence of sustainability strategy on the company's reputation in society. | 5 |
| | | The company considers social aspects in every innovation decision it makes. | 5 |

Table 1 outlines key aspects that are indicators of a company's success in sustainable innovation. First, companies need a clear policy and strategy for sustainable innovation, including an action plan that is communicated to all employees. Employee involvement is essential, including training, incentives, and involving them in developing

sustainable practices. The table also emphasizes the use of green technologies, where companies use, invest in, and evaluate environmentally friendly technologies. In addition, external collaborations, such as partnerships with academic institutions, governments, industry associations, and non-profit organizations, are effective in driving sustainable innovation. Systems for measuring and evaluating the performance and economic and social impacts of these innovations are also important. In general, companies that combine these aspects tend to achieve greater success in sustainable innovation and add value to the environment and society.

#### *3.3.1. Data Collection Technique*

Data collection techniques in this study began with observation, interviews, collecting documentary evidence, and conducting surveys. Observations were conducted directly on 50 small and large companies regarding the practices implemented by the companies in an effort to innovate economic management. Through these observations, researchers obtained accurate and assessable data. The indicators used as references in conducting observations are 1) Sustainable Innovation Policy and Strategy, 2) Employee Participation, 3) Utilization of Green Technology, 4) Collaboration with External Parties, 5) Measurement, and 6) Evaluation of Economic and Social Performance and Impact. The instruments have been prepared, and this study only conducted observations and checks on what has been done and implemented by the companies. This study also conducted data collection through in-depth and structured interviews with managers and employees of selected companies. Interviews were used to gather more detailed information and collect clear data related to their experiences in implementing sustainable management practices, challenges faced, and strategies considered effective in driving innovation. The questions have been prepared by the researcher and are in accordance with the research indicators. All respondent answers that have been transcribed are collected for analysis. This study also collects all data that are interrelated and documents them well. Documentation data is obtained during observation or interviews and when respondents show the documents requested by this study. The final stage is data collection via a survey of 357 people, including employees and leaders in small and large companies. The instrument is compiled based on indicators, has been developed, validated, and tested for reliability. The developed instrument has been declared valid and reliable with a Cronbach's Alpha above 0.6. The instrument is distributed to respondents via a previously created Google Form link, shared through media such as mobile phones and email. The instrument is assessed on a Likert scale from 1 (strongly disagree) to 5 (strongly agree). This survey data is collected and presented in a bar chart to facilitate the interpretation of the results and findings.

### *3.4. Validity and Reliability*

By ensuring that the research instrument has validity and reliability, data collection is no longer in doubt, and the answers from respondents can be accounted for. The results of validity and reliability form the foundation for conducting surveys with respondents (Scholtes, Terwee, & Poolman, 2011). Validity testing was conducted using a content validity approach, where experienced experts evaluated the indicators and instrument items to ensure their relevance and accuracy. There are six indicators in this study, and the first indicator contains five question components, each consisting of two items. Experts assessed that the indicators used were appropriate for measuring Economic Management Innovation and Sustainable Economic Strategies to Face Global Economic Challenges. On the other hand, reliability measures the consistency of measurement results from the same instrument over a certain period. Reliability testing is often done using Cronbach's alpha, where a value greater than 0.6 is considered to indicate good reliability (Farrokhi, Zarei, Bagherzadeh, Irannejad, & Hashjin, 2023). The results of the analysis of this research instrument yielded a Cronbach's alpha value of 0.82 for all instruments. This indicates that the instruments used have a high level of consistency. By conducting validity and reliability tests, researchers have ensured that the data obtained from the instrument are reliable and valid for analysis.

### *3.5. Data Analysis*

The data analysis technique in this study used descriptive statistics, assisted by SPSS Version 29.0, to form bar charts and interpret the results (Alalalmeh et al., 2024). The instruments that have been developed are relevant and have been tested for validity and reliability using Cronbach's Alpha above 0.6. Data obtained from observations, interviews, and documentation are collected, then reduced into overlapping data combined. The reduced data are coded and integrated into a table. The intersecting coding results are interpreted and become the final results of observation, interview, and documentation data. The data obtained from the survey were analyzed with the help of SPSS Version 29.0 by examining the average assessment of each respondent on each research indicator. The survey results are presented in the form of a bar chart to facilitate interpretation of the respondents' assessments. The final analysis interprets the coding results from observations, interviews, and documentation against the survey analysis results. These final results serve as the basis for determining research findings and conclusions regarding innovations in economic management that contribute to the sustainability and competitiveness of companies nationally and internationally.

## 4. RESULTS AND DISCUSSION

### *4.1. Results*

The following results present participants' assessments of the company's sustainable innovation policies and strategies.

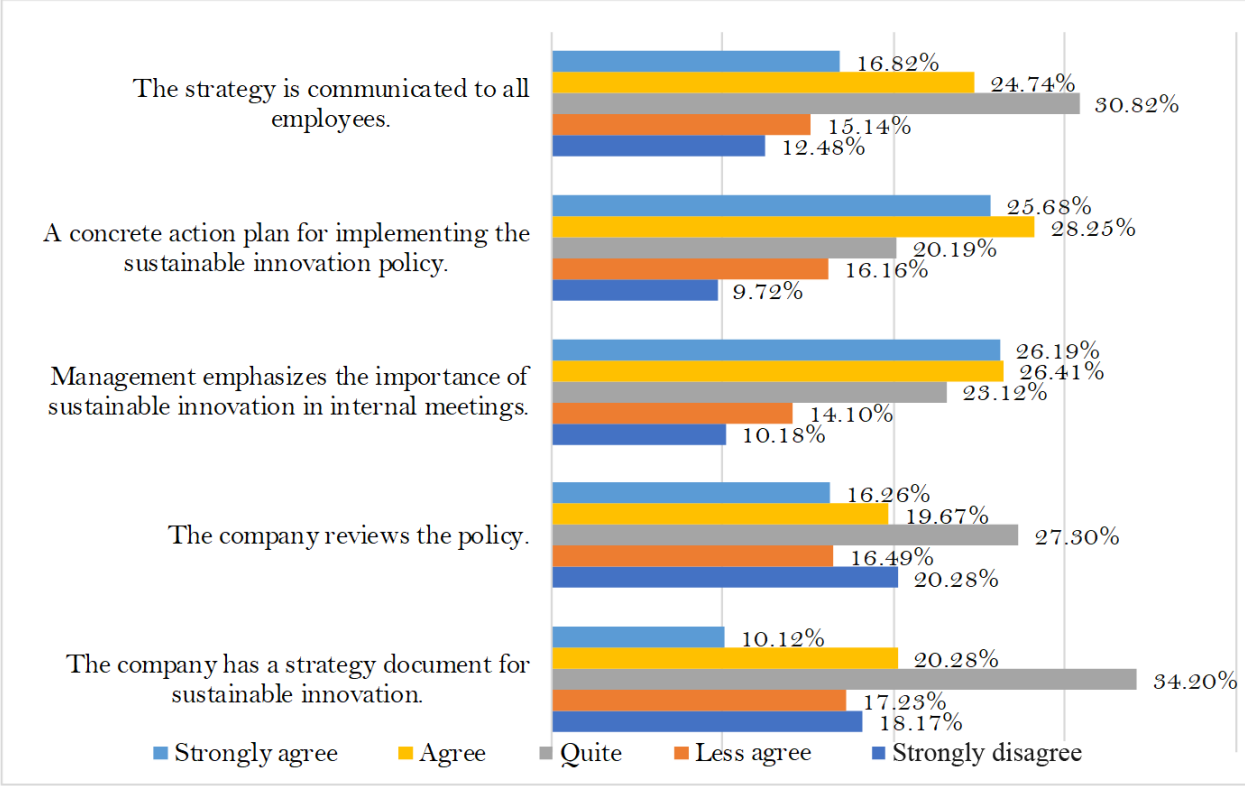


**Figure 2**. Respondents' assessment of sustainable innovation policies and strategies.

The results in Figure 2 show several important aspects, starting from the existence of a sustainable innovation strategy document, evaluation of policies implemented by the company, to the emphasis of management strategy on the importance of sustainable innovation in internal meetings of the company. The results of the respondents' assessment during the survey showed that 34.20% of respondents strongly agreed that the company had a sustainable innovation strategy document, while 27.30% disagreed. Additionally, 30.82% of participants considered that the

sustainable innovation policy was reviewed regularly. In terms of concrete action planning to implement the policy, 28.25% of respondents expressed the same assessment by showing a commitment to implementation. The process of communicating economic strategies to all employees also received attention, with 20.28% of respondents strongly agreeing that the strategy was presented well to all employees. However, there were also 10.12% of respondents who were dissatisfied with this aspect, indicating that there is still room for improvement in the internal communication process within the company to employees. Furthermore, 16.49% of participants expressed uncertainty, indicating potential deficiencies in understanding and disseminating information related to sustainable innovation policies in the small and medium business sector.

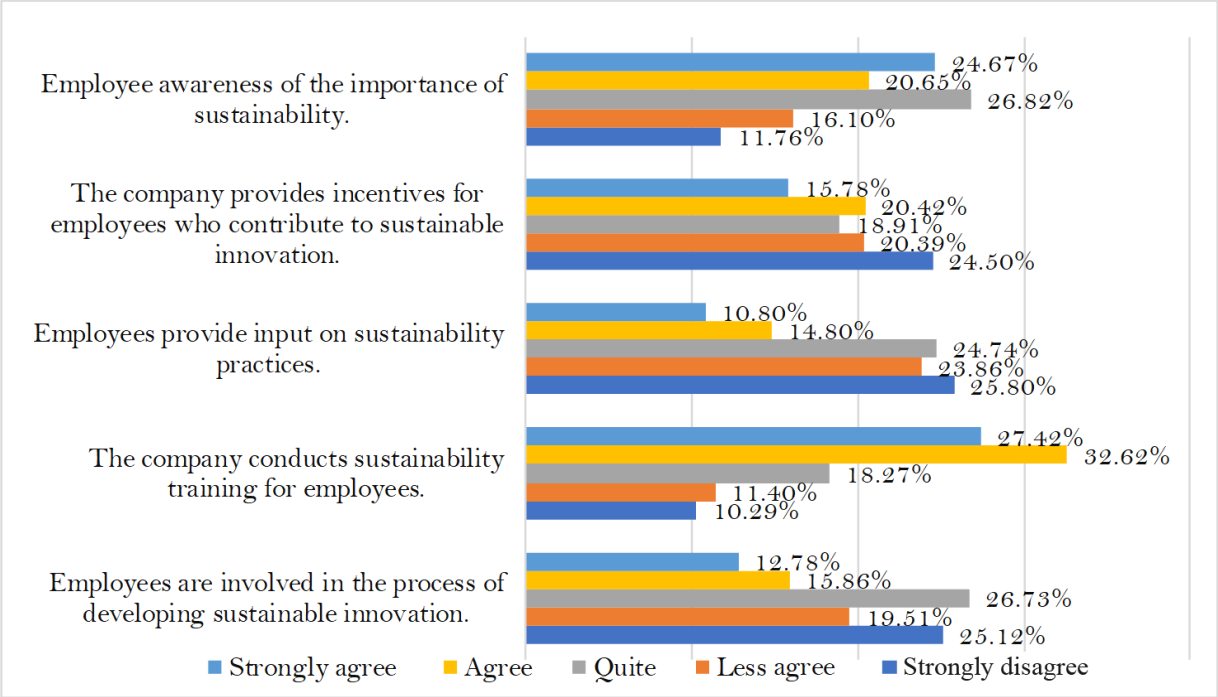


**Figure 3**. Respondents' assessment of employee participation.

Figure 3 shows the results of respondents' assessment of employee involvement in the development of sustainable economic innovation. There are 32.62% of participants who strongly support the idea of employee involvement in the process of developing sustainable economic innovation. This shows that most employees feel involved in sustainability-related initiatives. As many as 26.73% of participants also agree that the company provides sustainability training to its employees. This shows that the company not only encourages employee involvement but also provides effective training to improve their knowledge and skills related to sustainable practices. As many as 24.50% of participants also agreed that employees should provide feedback on the company's sustainability practices. This shows that there is a good communication channel between management and employees to exchange ideas and suggestions. The issue of compensation is not ignored, as 27.42% of participants believe that incentives are offered to employees who contribute to sustainable innovation, indicating that the company values employee participation in this process. Regarding awareness of the importance of sustainability, 26.82% of participants are aware of sustainability issues in their economy.

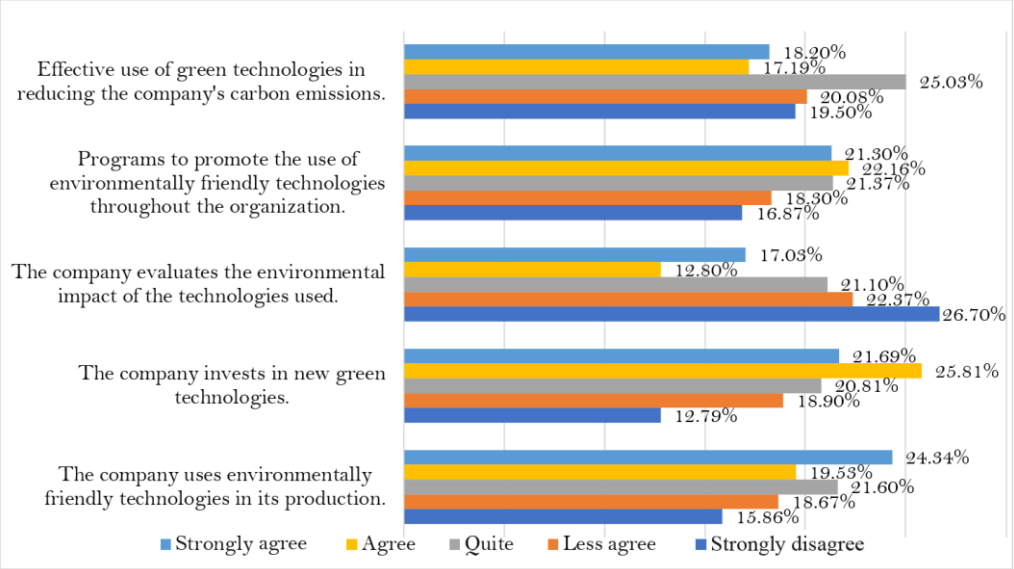


**Figure 4.** Respondents' assessment of the use of green technology.

In Figure 4, respondents provided their assessment of the company's use of green technology. The graph shows that 15.86% of respondents strongly agree that the company uses green technology in its production process, while 12.79% support it. The highest percentage, 26.70%, falls into the "strongly agree" category, indicating that the majority of participants believe the company has taken significant steps in implementing green technology. However, 16.87% of participants expressed disagreement, and 19.50% strongly disagreed, suggesting that some participants have concerns or doubts about the effectiveness of the company's efforts. Supporters of green technology also appear in the section evaluating the company's investment in new technology, with 18.67% strongly agreeing and 18.90% agreeing. However, 22.37% chose not to express a clear opinion in the "strongly agree" category on this issue. When discussing programs to promote environmentally friendly technologies, 18.30% of participants expressed high confidence by strongly agreeing, while 20.08% agreed. Reducing carbon emissions through green technologies was supported by 21.60% of participants and opposed by 20.81%, indicating widespread awareness of the positive impacts such measures can have.

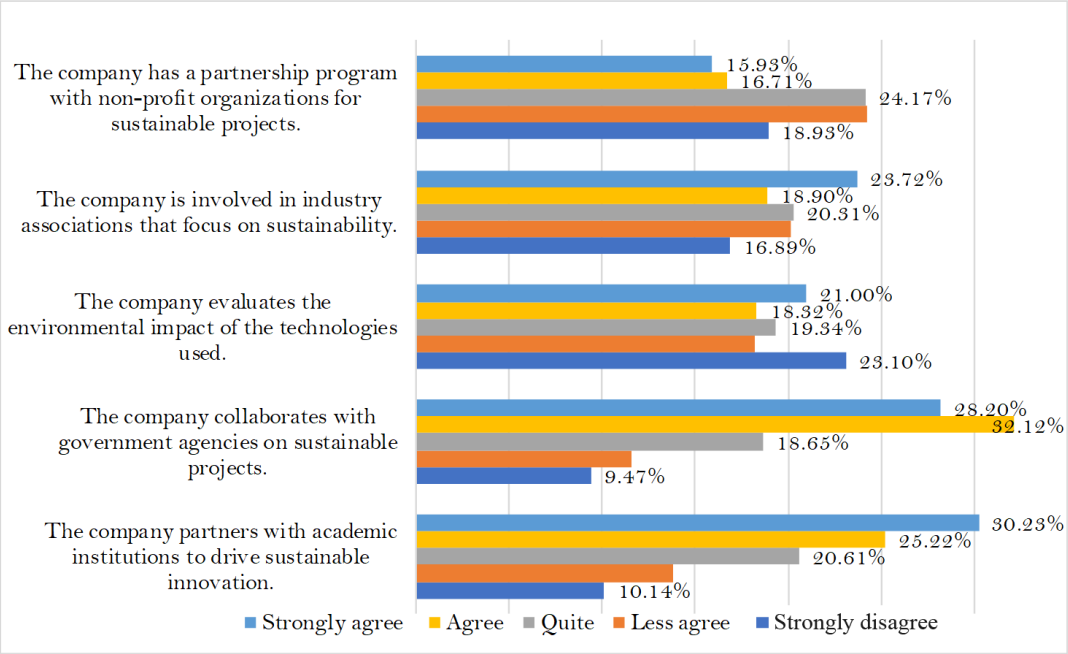


**Figure 5.** Respondents' assessment of collaboration with external parties.

Figure 5 shows participants' assessment of companies' collaboration with external parties in implementing sustainable innovation. Several areas of collaboration were identified, including with academic institutions, government agencies, industry associations, and non-profit organizations. A total of 32.12% of participants strongly agreed with collaborating with academic institutions, indicating their belief in the importance of such partnerships in driving sustainable innovation. Collaboration with government agencies also received significant attention, with 30.23% of participants supporting it. This reflects the importance of collaborating with the government in implementing sustainable projects. The majority of participants, 25.22%, agreed that companies evaluate the environmental impact of the technologies used, indicating their awareness of the importance of environmental aspects in every initiative. Meanwhile, only 9.47% of respondents stated "strongly disagree," indicating general acceptance of EIA. Regarding collaboration with industry associations, 24.17% of participants agreed on the importance of participating in these associations, highlighting the need for collaboration among industry players to achieve shared sustainability goals. Finally, 21.00% of participants rated partnership programs with non-profit organizations as very important, indicating that collaboration with the social sector is also effective in supporting sustainable projects. The results showed that respondents viewed external corporate collaboration positively in achieving sustainability goals, with strong support for collaboration with academics and government as key determinants.

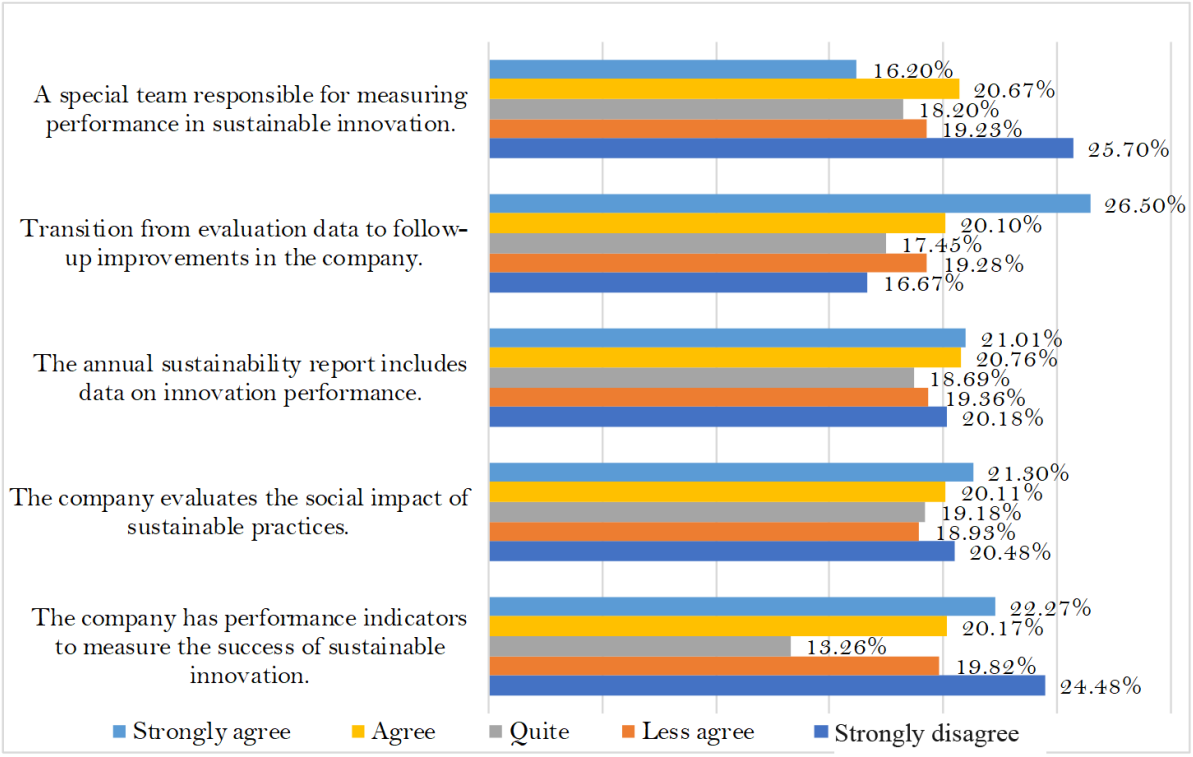


**Figure 6**. Respondents' assessment of performance measurement and evaluation.

Figure 6 shows the results of measuring and evaluating company performance in the field of sustainable innovation. Of the total participants, 24.48% stated that they "strongly agree" that the company has performance indicators to measure the success of sustainable innovation. Additionally, 20.48% also stated that they "strongly agree" that the company evaluates the social impact of its sustainable practices. The percentage of participants who stated that they "agree" with both statements was 20.18% and 25.70%, respectively, indicating a high level of trust in the company's efforts to carry out sustainable innovation. In terms of reporting, 19.82% of respondents stated that they "agree" that the annual sustainability report contains innovation performance data, while 18.93% support the company in transitioning from assessment data to continuous improvement. 19.36% of participants also stated that they "agree" that the company has a dedicated team tasked with measuring sustainable innovation performance.

However, some participants disagreed with the statements, with 19.23% indicating "less agree" regarding the company's assessment of social impact, and 13.26% questioning the inclusion of innovation performance data in the report. The lowest percentage was in the "strongly disagree" category, at 16.20%, who stated that there was no dedicated team. This assessment strongly supports sustainable economic innovation, although challenges remain, particularly regarding transparency and accountability in the assessment process.

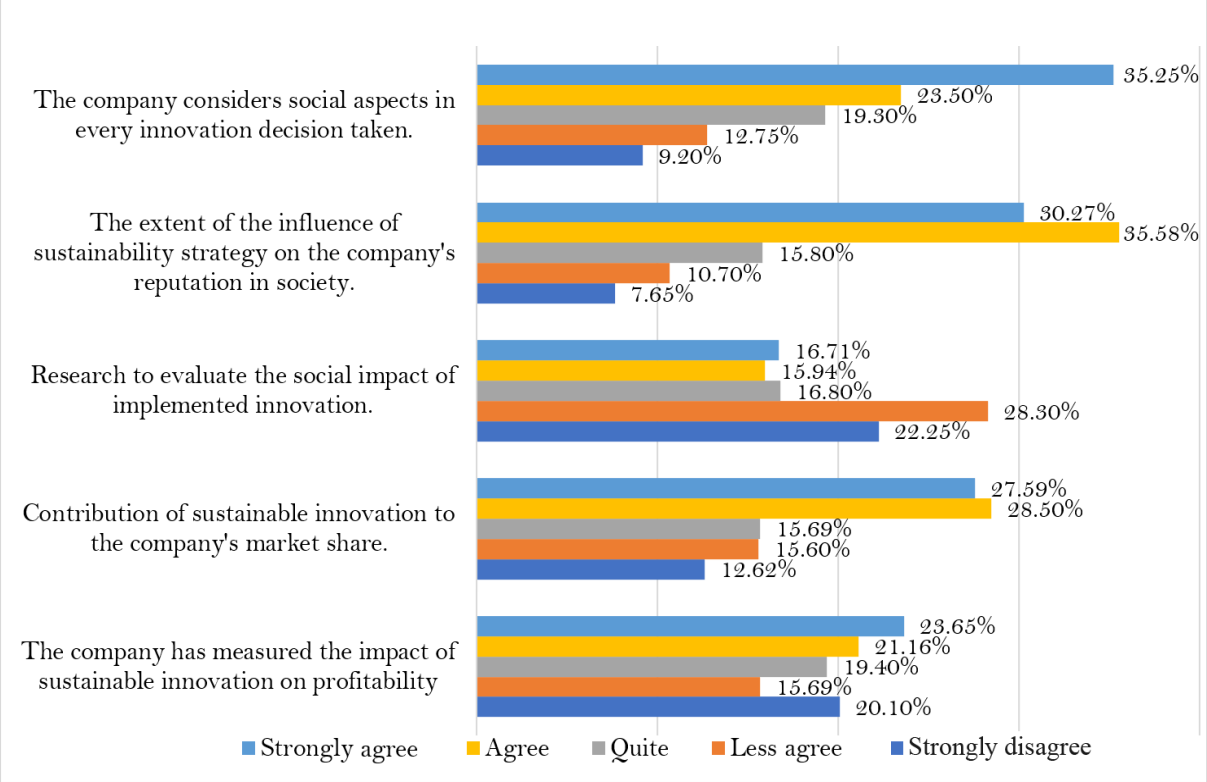


**Figure 7**. Respondents' assessment of economic and social impact.

Figure 7 shows the results of participants' assessment of the economic and social impacts of sustainable innovation implemented by the company. This data includes the contribution of sustainable innovation to the company's profitability, market share, and reputation in society. The results presented show that the largest percentage of participants, 35.58%, responded with "strongly agree" that sustainable innovation has a positive impact on the company's profitability. 28.50% of them also believe that innovation contributes significantly to the company's market share. Most participants, up to 30.27%, believe that sustainability strategies affect the company's reputation in society, indicating that attention to the social aspect of innovation is a priority. However, although more than half of the participants agreed, 16.71% of them disagreed with this positive effect. This shows a difference in views among participants on how sustainable innovation contributes to the company's social image. It is important to note that 12.62% of participants were in the "disagree" category, indicating skepticism towards claims of social and economic impacts. This suggests that companies need to be more transparent in reporting the results and benefits of implementing sustainable innovation. The evaluation results in Figure 7 provide new findings on how they evaluate the impact of sustainable innovation. These values show strong support on the one hand, while there is also some skepticism, reflecting the challenges companies face in convincing all stakeholders of the value of innovation.

**Table 2**. Research coding results from observations, interviews and intersecting documentation evidence.

| No | Indicator | Research coding results | Observation results | Interview results | Documentary evidence |
|---|---|---|---|---|---|
| 1 | Sustainable innovation policy and strategy | 34.20% agree that there is a strategy document. | There is a strategy document announced. | Management expressed the importance of this policy. | Corporate sustainability strategy document |
| | | 30.82% feel that policies are reviewed regularly. | Discussion in internal meetings regarding policies. | Participants wanted more involvement in policy formulation. | Minutes of meetings discussing strategic policies |
| 2 | Employee participation | 32.62% feel involved in sustainable innovation. | Employees participate in training. | Many employees wanted to provide input. | Sustainability training programs for employees |
| | | 26.73% agree that training is available. | Awards for innovation contributions are visible. | Employees felt valued when providing feedback. | Evidence of awards given to employees |
| 3 | Use of green technology | Data on the use of environmentally friendly technology is not disclosed. | - Observation of the use of environmentally friendly technology in the field. | The presence of new technology was noted during interviews. | Reports on the use of green technology in projects. |
| 4 | Collaboration with external parties | 32.12% agree with academic collaboration. | Partnerships with external institutions are visible. | The benefits of collaboration were clearly explained. | Cooperation contracts with academic institutions |
| | | 30.23% support collaboration with the government. | | | Evidence of cooperation with government agencies |
| 5 | Performance measurement and evaluation | 24.48% agree that there are indicators to measure sustainable innovation. | Evaluation processes are held periodically. | There is a need to increase transparency of evaluation results. | Annual reports covering performance monitoring |
| 6 | Economic and social impact | 35.58% agree that sustainable innovation increases profitability. | Social impact measurements are often carried out. | Skepticism about social impact reporting must be addressed. | Reports on the economic and social impact of innovation |

Table 2 shows the coding results of observations, interviews, and documentation related to sustainable innovation policies and practices. The main findings indicate that 34.20% of respondents agreed that there is a strategic document governing the policy, reflecting management efforts to implement sustainable innovation. However, only 30.82% believed that the policy is reviewed regularly, and respondents expressed a desire to increase their involvement in policy formulation, indicating room for improvement in employee participation. Regarding training, 32.62% of employees felt involved in sustainable innovation and confirmed the availability of sustainability training programs, although only 26.73% agreed that training was easily accessible. Employees feel valued when they provide feedback, and rewarding contributions to innovation is a positive step to increase motivation. However, there is no transparent data on the use of green technologies. Although comments were made on the use of new technologies, more comprehensive information is still needed. Additionally, collaboration with external entities showed 32.12% agreement for academic collaboration and 30.23% for government collaboration, highlighting the

importance of external relations in supporting sustainability policies. Regarding performance measurement, only 24.48% of participants agreed that there are indicators to measure sustainable innovation. The evaluation process is conducted periodically, but the transparency of the evaluation results needs improvement. Finally, 35.58% of participants agreed that sustainable innovation can increase profitability, although skepticism about social impact reporting remains. This underscores the need to strengthen and modernize the impact measurement and reporting process to effectively support sustainability strategies.

### *4.2. Discussion*

It was found in this study that, in the era of globalization and increasing awareness of environmental issues, it is important for companies to develop and implement sustainable economic innovation policies. This finding shows the results of the evaluation of the company's sustainable innovation policies and strategies based on respondents' assessments of what they feel and experience. There is a fairly good understanding of the existence of a sustainable innovation strategy, but there is still significant dissatisfaction with the communication process and employee involvement. As many as 34.20% of participants agreed that the company must have a sustainable innovation strategy, while 27.30% felt the opposite. This finding indicates the need for clarification and improvement of existing strategies to make them more accessible to all employees in the organization. Providing clear and consistent information and involving employees in the preparation of strategic documents can improve the understanding and implementation of policies. This aligns with the research conducted, which emphasizes the importance of transparent communication in encouraging employee involvement and improving overall organizational performance (Bello, Abdulraheem, Afolabi, Aka, & Gbenga, 2024; Saputra et al., 2024). Regarding employee involvement, it was found that 32.62% of participants felt involved in the process of developing sustainable innovation. Employee involvement is a key factor in fostering a culture of innovation in an organization's economic development. Employees who feel involved tend to be more committed to the company's sustainability initiatives. Their contributions can lead to more relevant and impactful innovations. Close collaboration between team members also accelerates the innovation process and implements proven best practices (Kanellopoulou, Giannakopoulos, & Karkaletsis, 2025; Tereshchenko et al., 2024). Therefore, companies need to create an environment where employee ideas are valued and included as part of the innovation strategy. However, only 26.73% of respondents agreed that the company provides sustainability training to employees, indicating a gap in employee training and competency development.

Training is an important means to improve employee knowledge and skills related to sustainable economic practices. A good training program can increase awareness and understanding of how best practices should be applied in sustainable economic innovation. This contributes to the view that companies are not only responsible for providing tools and resources but also for equipping employees with the knowledge needed to implement initiatives. To successfully realize change, organizations must implement relevant training programs (Santos, Carvalho, & Martins, 2024). Stakeholders also need to consider the aspect of collaboration with external parties. As many as 32.12% of participants agreed that companies should collaborate with academic institutions, while 30.23% supported collaboration with government institutions. Collaborating with external parties can provide companies with access to new resources, knowledge, and technologies that support the development of sustainable innovation. In addition, this collaboration can also improve the company's social reputation and increase credibility in implementing sustainability policies. Collaboration with research institutions and governments can increase synergy in innovation (Quttainah & Ayadi, 2024). Despite the benefits, the most significant challenge faced by companies is measuring and evaluating the performance of sustainable innovation. The results showed that only 24.48% of participants felt that their company had indicators to measure the success of sustainable innovation. It was found that the lack of a transparent evaluation system is an obstacle to understanding the impact of sustainable investment and innovation. Effective measurement not only serves as a tool to monitor progress but also supports better decision-making for the company. This is in line with the balanced scorecard concept introduced by Kumar, Lim, Sureka, Jabbour, and Bamel

(2024), emphasizing performance measurement across multiple dimensions, including financial and non-financial performance. Participants' views on the economic and social impacts of sustainable innovation also showed a range of understandings. Around 35.58% of participants agreed that sustainable innovation increases the company's profitability, but 16.71% were unsure. This uncertainty encourages companies to be more transparent in reporting data and results to investors. This transparency is important so that external parties and internal employees can gain a better understanding of the benefits of sustainable innovation and the company's position in the market. Research by Liu, Heinberg, Huang, and Eisingerich (2023) shows that companies that are more transparent about their sustainability performance gain a competitive advantage over other companies.

## 5. CONCLUSION, POLICY RECOMMENDATIONS AND LIMITATIONS

The conclusion of the study emphasizes the importance of developing sustainable innovation policies and strategies that include the active participation of all members of the organization. Employee engagement contributes to a positive innovation culture, aligning with management theories that highlight the collaborative value of the innovation process. This study confirms that employee engagement is not limited to individual motivation but also influences the successful implementation of a company's innovation strategy. Through internal communication and training, organizations need to adopt a more transparent and inclusive approach to developing sustainability strategies. There is a need to strengthen the measurement and reporting of the social and economic impacts of sustainable innovation, which are major concerns in social and economic accountability. The skepticism among employees indicates the necessity of implementing more transparent reporting practices to build stakeholder trust. Companies must consider the public's perception of the social impact of sustainable innovation policies. Therefore, this study offers a new perspective on innovation management theory, emphasizing the importance of employee engagement, effective communication, and accountability in supporting a sustainable and more effective economic innovation strategy. A limitation of this study is the limited sample size, which may not represent all employees in the company. This could affect the generalizability of the results, especially considering the diversity of employee backgrounds and perspectives. The study relies on self-reported survey data, where participants may have vested interests in their evaluations of the company. Their assessments of sustainable innovation initiatives may be influenced by personal experiences, which may not reflect the company's overall performance. The study focuses more on the qualitative and quantitative aspects of sustainable innovation, while the impact of external factors such as market conditions and government regulations has not been explored in depth. Future research should include a larger and more diverse sample to increase the validity of the results. It could also expand to use a mixed approach that combines a broader range of qualitative and quantitative data and considers external factors such as political, economic, and social environments to provide more comprehensive data on the challenges and opportunities faced by companies.

### *5.1. Policy Implications and Future Research*

The practical implications of this study emphasize the need for companies to adopt a more strategic approach in developing and implementing sustainable innovation policies. First, companies should improve internal communication about their sustainability strategies by preparing clear and easily accessible policy documents for all employees. Holding regular internal meetings on the importance of sustainable innovation will increase employee understanding and commitment to the company's goals. Furthermore, effective and affordable training should be provided to improve employee knowledge and skills related to sustainability practices. This will create an environment that supports active employee participation in developing sustainability initiatives and encourages them to provide constructive feedback. Companies also need to develop a transparent measurement system to evaluate sustainable innovation performance. By implementing clear and measurable indicators, management can monitor the economic and social impacts of implemented policies while fulfilling its accountability responsibilities to stakeholders.

Furthermore, collaboration with external parties, such as academic institutions and governments, should be strengthened, as these partnerships will provide the resources and knowledge needed to enhance innovation. Finally, by increasing transparency in reporting the results of sustainability initiatives, companies can not only build trust among employees and the community but also improve their social image and reputation in the market.

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