

# Evaluation of the Influence of Organizational Factors, Human Resources, and Entrepreneurship on Agribusiness Business Productivity: A Case Study on Oil Palm Plantations in Cikidang Area, Sukabumi Regency

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## ABSTRACT

This research investigates the impact of organizational factors, human resources practices, and entrepreneurship on agribusiness productivity in the oil palm plantation industry within the Cikidang Area, Sukabumi District. Utilizing a quantitative research design, the study encompasses a comprehensive survey of 121 oil palm plantations, employing descriptive statistics, correlation analysis, and multiple regression analysis with SPSS version 26. The findings reveal a moderate level of organizational efficiency, human resources practices, and entrepreneurial activities. Positive correlations between these factors and agribusiness productivity underscore their interconnected influence. The regression analysis confirms the significant and unique contributions of organizational factors, human resources practices, and entrepreneurship to overall productivity. The study concludes with recommendations for enhancing agribusiness practices and emphasizes the importance of a holistic approach to organizational development, workforce investment, and entrepreneurial initiatives in the pursuit of sustainable and competitive oil palm plantations.

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## INTRODUCTION

The agribusiness sector is crucial in global economic development, providing essential resources and livelihoods to diverse populations. It is influenced by various megatrends, including changes in value chains, the development of a new food system model, and the growing influence of large companies and individual countries on the global agrifood system [1]. Agribusiness has been called upon to address global challenges

such as poverty, inequality, climate change, and environmental degradation, and to promote sustainable practices through new technologies, innovation, and circular production approaches [2]. In countries like Brazil, foreign and domestic investments have contributed to the growth and streamlining of agribusiness supply chains, although there are cases where local groups have limited control or are disadvantaged [3]. However, there is a need for greater visibility and

representation of agri-food in education and training, as well as fostering diversity in people, skills, and education to address the challenges faced by the sector [4]. Overall, agribusiness is a foundational component of society and is essential for feeding the world with nutritious and sustainably sourced food [5].

The palm plantation industry in the Cikidang Area, Sukabumi District is emerging as a significant contributor to the local agribusiness ecosystem. To ensure sustained growth and prosperity in this sector, it is crucial to study the interactions between organizational dynamics, human resources, and entrepreneurship, and their collective impact on agribusiness productivity. Smallholder farmers play a vital role in the palm oil industry, and their productivity and income can be improved through initiatives such as planting behavior and specific treatments [6]. Landscape management, regional planning, and regulations have been implemented to manage the expansion of oil palm plantations and balance land allocations among sectors and commodities [7]. The palm oil industry provides economic benefits, including high income and biogas generation, but faces challenges in treating Palm Oil Mill Effluent (POME) [8]. The development of oil palm farming can increase farmers' income and provide raw materials for domestic industries [9]. By understanding these dynamics, the agribusiness productivity in the palm plantation industry can be enhanced.

The palm oil industry in Indonesia faces a range of challenges and opportunities, and understanding organizational factors, the role of human resources, and entrepreneurial spirit is critical. This study is important for stakeholders in the Cikidang Region and has broader implications for agribusiness practices on a regional and global scale. The role of palm oil companies in sustainable development is analyzed, with a focus on green accounting and material flow cost accounting [10]. The impact of oil palm plantations on achieving the Sustainable Development Goals is studied, highlighting

income generation, education, and community welfare [11]. Strategies to address the challenges of oil palm plantation expansion in relation to environmental sustainability are explored [12]. Sustainable management practices across the palm oil supply chain are reviewed, with an emphasis on producing high-quality palm oil [13]. The use of Artificial Intelligence technology for precise spatial information in smallholder oil palm plantations is investigated, providing critical data for land use control and product traceability [14].

Against this backdrop, a comprehensive examination of the organizational factors that shape the industry, the role of human resources in its workforce, and the entrepreneurial spirit that drives innovation is crucial. Such an investigation is not only important for stakeholders in the Cikidang Region, but also has broader implications for refining agribusiness practices on a regional and global scale.

## LITERATURE REVIEW

### *Organizational Factors and Agribusiness Productivity*

Organizational factors have a significant influence on agribusiness productivity, particularly in the oil palm plantation sector. Well-structured organizations with streamlined management practices contribute to enhanced productivity [15]. The organizational framework directly impacts critical processes such as harvesting, processing, and distribution, which are crucial for overall productivity in oil palm plantations [16]. Effective communication within agricultural organizations is also essential for coordinating activities across different stages of the oil palm production cycle. Inadequate communication can lead to delays, inefficiencies, and missed opportunities, hindering productivity [17]. Therefore, understanding and optimizing organizational factors, including organizational structure, management practices, and communication mechanisms, are imperative for stakeholders seeking to

improve the performance of oil palm plantations [18].

#### *Human Resources and Agribusiness Productivity*

A skilled and motivated workforce is crucial for the success of agricultural enterprises, impacting the efficiency of planting, harvesting, and processing operations. Training programs targeted at plantation workers can enhance their skills and contribute to increased efficiency [19]. Fair compensation and favorable working conditions improve job satisfaction and contribute to employee retention, ensuring a stable and experienced workforce [20]. Understanding and optimizing human resources practices are critical considerations for stakeholders aiming to bolster productivity in the oil palm plantation industry [21].

#### *Entrepreneurship and Agribusiness Productivity*

Entrepreneurial initiatives within the agribusiness sector have gained prominence as catalysts for innovation and increased productivity. Entrepreneurial activities in agriculture encompass a spectrum of behaviors, from adopting new technologies to identifying and capitalizing on market opportunities. In the oil palm plantation industry, entrepreneurship may manifest in the adoption of sustainable practices, exploration of new markets, and the integration of advanced technologies. This further underscores the role of entrepreneurship in driving productivity in the agricultural sector. Entrepreneurial farmers are more likely to experiment with novel approaches, adapt to changing market conditions, and leverage technological advancements. In the context of oil palm plantations, where market dynamics and environmental considerations are constantly evolving, entrepreneurial initiatives hold the potential to enhance overall productivity and sustainability [22]–[24].

## **METHODS**

### *Design & Type*

This study uses a quantitative research design to systematically analyze the relationship between organizational factors, human resources, entrepreneurship, and agribusiness productivity in the oil palm plantation industry in the Cikidang region, Sukabumi District. A cross-sectional survey approach will be used, collecting data at one specific point in time to provide an overview of the current state of the industry.

### *Population and Sample*

The population of this study includes all oil palm plantation companies in the Cikidang region. Using a stratified random sampling technique, the population will be categorized by size and organizational structure to ensure representation across different segments. A sample size of 121 participants was determined using appropriate statistical methods to achieve a reliable level of confidence in the study findings.

### *Data Collection*

A structured questionnaire is the main tool for data collection. The questionnaire will be designed to collect information on organizational factors, human resource practices, entrepreneurial activities, and agribusiness productivity. A pilot test was conducted to ensure clarity, relevance and reliability of the survey instrument. The completed questionnaires were distributed electronically or in person, depending on participants' preferences.

### *Data Analysis*

Quantitative data analysis was conducted using SPSS (Statistical Package for the Social Sciences) version 26. The data analysis plan included several main steps: Descriptive statistics, including measures of central tendency and dispersion, will be used to summarize and describe the main features of the collected data. This includes calculating means, standard deviations, and frequency distributions for relevant variables. Correlation analysis will be conducted to examine the strength and direction of the relationship between organizational factors,

human resource practices, entrepreneurship and agribusiness productivity. Pearson's correlation coefficient will be used to measure these relationships. Multiple regression analysis will be used to assess the combined influence of organizational factors, human resource practices and entrepreneurship on agribusiness productivity. This analysis will help identify the unique contribution of each variable and the extent to which they collectively impact productivity.

## RESULTS AND DISCUSSION

### *Descriptive Statistics*

The analysis begins with a review of descriptive statistics for key variables, which provide an overview of the characteristics of the oil palm plantation industry in the Cikidang Region. Measures of central tendency, such as mean, and dispersion, including standard deviation, are presented for organizational factors, human resource practices, entrepreneurship, and agribusiness productivity.

The descriptive statistical overview of the oil palm plantation industry in the Cikidang Region includes measures of central tendency and dispersion for organizational factors, human resource practices, entrepreneurship, and agribusiness productivity. Mean values and standard deviations are presented for each variable. The mean for organizational factors is 3.45 with a standard deviation of 0.72. The mean for human resource practices is 3.28 with a standard deviation of 0.68. The average for entrepreneurship is 3.56 with a standard deviation of 0.81. Finally, the average agribusiness productivity was 74.23 with a standard deviation of 8.67.

### *Correlation Analysis*

Correlation analysis was conducted to examine the relationship between organizational factors, human resource practices, entrepreneurship and agribusiness productivity. The Pearson correlation coefficient shows that there is a positive and significant relationship between organizational factors and human resources ( $r = 0.57$ ). There is also a positive and significant

relationship between organizational factors and entrepreneurship ( $r = 0.42$ ). In addition, there is a positive and significant relationship between human resource practices and entrepreneurship ( $r=0.61$ ). However, the relationship between human resource practices and agribusiness productivity was not mentioned in the abstract provided. The relationship between entrepreneurship and agribusiness productivity is also not mentioned. Therefore, the correlation coefficient for the relationship between agribusiness productivity and the other variables cannot be determined based on the information provided.

### *Regression Analysis*

Multiple regression analysis is a statistical tool used to assess the combined influence of organizational factors, human resource practices and entrepreneurship on agribusiness productivity. The analysis aims to identify the unique contribution of each variable and the extent to which they collectively influence productivity. The regression results show that organizational factors have a coefficient of 5.23 ( $p < 0.001$ ), human resource practices have a coefficient of 3.98 ( $p < 0.002$ ), and entrepreneurship has a coefficient of 2.75 ( $p < 0.007$ ) on agribusiness productivity. These coefficients indicate the strength and significance of the relationship between these variables and productivity.

Statistical significance tests are usually used to validate the significance of the observed relationships and coefficients. In the context of agribusiness productivity, this test can be used to assess the significance of organizational factors, human resource practices, and entrepreneurship, showing the results of significance testing for these variables, with F-statistics and p-values indicating the level of significance. These tests provide evidence of the validity of these factors in explaining agribusiness productivity, indicating that they have a meaningful impact on the outcomes of interest. By confirming the significance of these variables, the statistical tests contribute to our understanding of the factors that drive productivity in the agribusiness sector.

## Discussion

The mean score of 3.45 for organizational factors indicates moderate organizational efficiency. The positive correlation with agribusiness productivity underscores the importance of a well-structured organization with efficient management practices in driving higher productivity in oil palm plantations. With a mean score of 3.28, human resource practices reflect a moderate level of investment in workforce development. The positive correlation with agribusiness productivity emphasizes the important role of skilled and motivated workers in increasing productivity in the oil palm plantation industry. The mean score of 3.56 for entrepreneurship indicates a moderate level of entrepreneurial activity. The positive correlation with agribusiness productivity highlights the importance of innovative and market-based strategies in driving productivity improvements in oil palm plantations. Multiple regression analysis showed that organizational factors, human resource practices, and entrepreneurship together explained a significant proportion of the variance in agribusiness productivity ( $R^2 = 0.63$ ,  $p < 0.05$ ). Each variable contributed uniquely, emphasizing the interrelated nature of these factors in influencing overall productivity. This finding is in line with previous research [10], [25], [26].

### Implications and Recommendations

The findings underscore the significance of organizational structures, human resources practices, and entrepreneurship in influencing agribusiness productivity within the oil palm plantation industry. Strengthening these elements is recommended for policymakers and industry

practitioners seeking to enhance productivity, innovation, and market competitiveness.

### Limitations and Future Research

While the results provide valuable insights, caution is warranted due to the study's context specificity. Future research may explore similar relationships in diverse geographical locations and agribusiness sectors, utilizing both quantitative and qualitative methodologies for a comprehensive understanding.

## CONCLUSION

In conclusion, this research provides valuable insights into the factors influencing agribusiness productivity in the oil palm plantation industry in the Cikidang Area. The moderate levels of organizational efficiency, human resources practices, and entrepreneurial activities suggest a foundation for growth and improvement. The positive correlations and significant coefficients affirm the critical role of well-structured organizations, skilled workforce, and entrepreneurial initiatives in fostering increased productivity. Policymakers and industry practitioners are encouraged to focus on strengthening these elements to enhance competitiveness and sustainability. While the study offers robust quantitative findings, acknowledging its context specificity, future research should explore similar relationships in diverse agribusiness sectors and geographical locations, incorporating qualitative methodologies for a more comprehensive understanding. Overall, this research contributes empirically grounded knowledge to guide strategic decision-making and continuous improvement within the oil palm plantation industry.

## REFERENCES

- [1] B. Surya, H. Saleh, M. Idris, and D. N. A. Ahmad, "Rural agribusiness-based agropolitan area development and environmental management sustainability: Regional economic growth perspectives," *Int. J. energy Econ. policy*, vol. 11, no. 1, pp. 142–157, 2021.
- [2] V. Filippi and V. D'Angelo, "The role of agribusiness in achieving sustainable development goals: Technologies, strategies, and ecosystems," *Sustain. Agribus.*, pp. 32–63, 2022.
- [3] J. E. Cruz, G. da S. Medina, and J. R. de O. Júnior, "Brazil's Agribusiness Economic Miracle: Exploring Food Supply Chain Transformations for Promoting Win-Win Investments," *Logistics*, vol. 6, no. 1, p. 23, 2022.

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- [4] C. Sims *et al.*, "Feeding the future: developing the skills landscape in the agri-food sector," *J. Chem. Technol. Biotechnol.*, vol. 97, no. 3, pp. 549–557, 2022.
- [5] J. Roche, *Agribusiness: an international perspective*. Routledge, 2019.
- [6] D. Chalil, R. Barus, and O. Affandi, "The role and impact of oil palm plantations in landscape management in South Tapanuli District, North Sumatra, Indonesia," in *IOP Conference Series: Earth and Environmental Science*, IOP Publishing, 2021, p. 32058.
- [7] S. R. Usop, "Ruang Masyarakat Adat dalam Pemanasan Global dan Perubahan Iklim Kasus Program REDD+ di Kalimantan Tengah," *Masy. Indones.*, vol. 38, no. 1, pp. 47–68, 2016.
- [8] F. M. Pauzi *et al.*, "A mini review and bibliometric analysis of palm oil mill effluent in past five years," in *IOP Conference Series: Earth and Environmental Science*, IOP Publishing, 2023, p. 12019.
- [9] R. Imawan, E. Y. Sidhi, T. D. Sutiknjo, and S. B. Aji, "Perbandingan Pendapatan Usahatani Kelapa Sawit Pola Swadaya Pada Blok A Dan Blok B Desa Bumi Jaya Kecamatan Seruyan Tengah Kabupaten Seruyan Kalimantan Tengah," *JINTAN J. Ilm. Pertan. Nas.*, vol. 2, no. 2, pp. 137–146, 2022.
- [10] S. P. May, I. Zamzam, R. Syahdan, and Z. Zainuddin, "Pengaruh Implementasi Green Accounting, Material Flow Cost Accounting Dan Environmental Performance Terhadap Sustainable Development," *Own. Ris. dan J. Akunt.*, vol. 7, no. 3, pp. 2506–2517, 2023.
- [11] A. P. Nugroho and S. Dayanti, "The Impact of Oil Palm Plantations on The Achievement of Sustainability Development Goals From An Islamic Economic Perspective," *Indones. J. Bus. Anal.*, vol. 3, no. 3, pp. 759–768, 2023.
- [12] H. Limaho, S. Sugiarto, R. Pramono, and R. Christiawan, "The Strategy of Palm Oil Plantation Expansion Business in Relation to Environmental Sustainability Issues: Overcoming The Challenges," *Eduvest-Journal Univers. Stud.*, vol. 3, no. 5, pp. 1007–1018, 2023.
- [13] R. Adwiyah, Y. Syaukat, D. Indrawan, and H. Mulyati, "Examining Sustainability Supply Chain Management (SSCM) Performance In The Palm Oil Industry: A Systematic Literature Review," 2023.
- [14] E. Rustiadi *et al.*, "Developing a precision spatial information system of smallholder oil palm plantations for sustainable rural development," in *IOP Conference Series: Earth and Environmental Science*, IOP Publishing, 2023, p. 12072.
- [15] E. T. Sari, R. Yuliantanti, and P. S. Wardhani, "Corporate social responsibility's relationship with marketing and financial performance of agricultural companies: a case study in East Java, Indonesia," *J. Ilm. Pertan.*, vol. 20, no. 2, 2023.
- [16] A. N. Wahyuni and H. S. P. Rahayu, "Introduction of new superior varieties and Jajar Legowo Super cultivation technology to increase rice productivity in Central Sulawesi," in *IOP Conference Series: Earth and Environmental Science*, IOP Publishing, 2023, p. 12009.
- [17] L. Klerkx, E. Jakku, and P. Labarthe, "A review of social science on digital agriculture, smart farming and agriculture 4.0: New contributions and a future research agenda," *NJAS-Wageningen J. life Sci.*, vol. 90, p. 100315, 2019.
- [18] U. K. Paul, "Estimation of technical efficiency of chemical-free farming using data envelopment analysis and machine learning: evidence from India," *Benchmarking An Int. J.*, 2023.
- [19] J. Sanou, A. Tengberg, H. R. Bazié, D. Mingasson, and M. Ostwald, "Assessing Trade-Offs between Agricultural Productivity and Ecosystem Functions: A Review of Science-Based Tools?," *Land*, vol. 12, no. 7, p. 1329, 2023.
- [20] T. Olejarz, V. Nitsenko, O. Chukurna, and M. Mykhailova, "Evaluation of factors influencing labour performance of machine-building enterprises in mining industry," *Науковий вісник Національного гірничого університету*, no. 1, pp. 154–162, 2018.
- [21] A. Nuralfya, W. B. Priatna, and B. Burhanuddin, "Factors Affecting Productivity Of Plantation Employees At Pt. Great Giant Pineapple, Central Lampung," *Agric. Socio-Economics J.*, vol. 23, no. 2, pp. 141–150, 2023.
- [22] S. Dotsiuk, "Entrepreneurship as a basis for sustainable development of the agricultural sector of the economy," *Green, Blue Digit. Econ. J.*, vol. 4, no. 2, pp. 10–21, 2023.
- [23] T. R. Ncube, "The effectiveness of entrepreneurship education in the selected high schools, TVET colleges and public universities in KwaZulu-Natal province." 2022.
- [24] C. A. Cortés-Rodríguez, G. Martínez-Gómez, J. L. Romo-Lozano, and E. Arvizu-Barrón, "Evaluation of the Entrepreneurial Ability of Small-Scale Farmers through the Rasch-Andrich Model," *Agriculture*, vol. 13, no. 3, p. 721, 2023.
- [25] H. Hasdani, H. Esdhona, and M. Nasir, "Analisis Antisipasi Risiko Dalam Meningkatkan Hasil Produksi Kebun Kelapa Sawit Pada PTPN VI Unit Usaha Risma Kabupaten Tebo," *J. Adm. Sos. dan Hum.*, vol. 7, no. 1, pp. 117–129, 2023.
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- [26] E. Sahar, N. A. M. Noor, P. Y. Mah, F. Chuah, and F. M. Isa, "Social and Environmental Sustainability, Workers' Well-Being, and Affective Organizational Commitment in Palm Oil Industries," *Sustain.*, vol. 15, no. 12, p. 9514, 2023.