

The Influence of Gender Performance of *Village-Owned Enterprises* in East Java, Indonesia

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Received: 28 August 2023; Revised: 21 November 2023; Accepted: 1 April 2024

ABSTRACT

The Village-Owned Enterprises (formally known as Badan Usaha Milik Desa in Bahasa Indonesia) constitute a significant facet of the government's endeavors to bolster the rural economic growth; however, the current scenario in Indonesia showcase is concerning the trend of underperformance within these enterprises. This study pays attention for exploring the impact of female managers in their performance on village-owned enterprises, employing cross-sectional data sources from 100 enterprises in East Java Province, Indonesia. Those data were subjected to analyze the order of a profit model. The main finding suggests that the female managers positively and significantly contribute to the performance of village-owned enterprises. This thought implies that business could be led by female managers tend to better superior performance compared to those managed by male. Conversely, this study highlight the significant role of demographic profile such as an age and education in the performance of Village-Owned Enterprises (VOEs). Consequently, the research implies the urgent-needed to enhance the woman empowerment in rural area, particularly by encouraging their active participation in VOEs. Furthermore, this study emphasizes the importance of improving the knowledge and skill of managers both male and female in a general sense. These efforts have the potential method to improve the contribution of village-owned enterprises to the national economic. Therefore, the study findings emphasize the pivotal role of female managers in their act of improving the performance of VOEs. These findings focus on the pressing need for woman empowerment in the rural area. By addressing these imperatives, policymakers could leverage the potential of VOEs to drive the sustainable the rural economic development in Indonesia.

Keywords: gender; performance; VOEs; rural development; indonesia

How to cite:

Nugroho, T. W. (2024). The Influence of Gender Performance of *Village-Owned Enterprises* in East Java, Indonesia. *Habitat*, 35(1), 1–7. <https://doi.org/10.21776/ub.habitat.2024.035.1.1>

1. Introduction

The rural economic development become a main attention to Indonesian government's spacious strategy to maintain the national economic growth and reduce the poverty. Numerous efforts have been made by the government to improve rural economy such as subsidies, rural infrastructure development, and cultivation of rural enterprises (Tambunan, 2008). Nowadays, an activity from the government's commitment for revitalizing the rural economy by doing the establishment of Village-Owned Enterprises (VOEs), formally known as '*Badan Usaha Milik Desa*' (BUMDes) in Bahasa Indonesia. As legally sanctioned entities, these enterprises are formed through collaborative efforts between villages and local administrative bodies in Indonesia (Nugroho et al., 2023). Their mandate includes diverse any objectives, such as the management of village businesses, efficient utilization of assets, promotion of investments, enhancement of productivity, provision of essential services, and involvement in various commercial activities in rural areas (Hill, 2000). However, the prevailing landscape reveals a notable underutilization of the substantial village potential and assets. Otherwise, it could be harnessed optimally to push the village-level economic expansion. This underperformance resonates across dimension, manifesting as a deficiency in capability and insufficiency of service offerings capable of ushering tangible economic improvement



inside the community. Furthermore, this thing triggers the crucial matters of village governance requisites, particularly in augmenting village revenue streams conventionally reliant upon the revenues generated from the village-owned land. In line with its obligation to foster autonomy at the village level, the government has rolled out a policy that attempts to amplify the opportunities for village administration to harness their latent potential (Sutiyo & Maharjan, 2017). The cultivation of economic prowess and income augmentation have emerged as an integral components of this autonomy-oriented agenda. By empowering village governments to orchestrate their monetary destiny, these policies signify a profound shift toward decentralized decision-making and a more inclusive, community-driven approach to development.

The establishment of VOE has a purpose as a medium or method for local economic development at the village level. This issue is done based on the needs, potential, and capacity of the village as well as capital participation from the village government in the form of financing and village's prosperity and also has the goal is to improve the economic level of the village community. The basic VOE's formation based on government and village community initiatives that create a cooperative, participatory, and emancipatory principles from the community. In spite of this, according to Nugroho et al., (2020), there are many of Village-Owned Enterprises that are not developed well and underperforming. There are several factors affected this issues, some of them are management, financial capital, and even human capital. Addressing these issue, the government could start through develop the human capital by improving the member's skill, literacy, and capacity. In contrast, the equality chance among the members should be considered especially for male and female workers.

Currently, the gender equality plays an essential role in developing the communities or firms around the world. For instance, Marinova et al. (2016) suggests that the gender equality need to be applied on firm or organization to get a better achievement. Similarly, Martín-Ugedo and Mínguez-Vera (2014) investigate the role of female members of board on firm performance in Spanish. This finding suggested that having female on the board members improve the firm performance significantly. An increasing amount of researches also suggest that the woman empowerment may have positive economic effects both of the individuals, the households and communities where they live (Duflo, 2012; Gates, 2014; Klasen, 2018). The numerous researches have extensively explored the significant impacts of the gender diversity on firm performance, shedding the light on the multifaceted ways in which a balanced representation both of men and women in leadership position could enhance the organizational outcome. This studies underline the important issues for decision-making, innovation, and overall corporates success, the underscoring to the notion that diverse teams tend to offer a broader spectrum of perspectives and skills, thereby contributing to the heightened performance and competitiveness. Nevertheless, despite the extensive study and discussion encompassing the impact of gender diversity on traditional corporate organizations, there is a noticeable gap regarding how gender reports to the performance of Village-Owned Enterprises (VOEs).

Despite the pivotal role that VOEs play in contributing to local economic development, there exists a lack of empirical evidence exploring the potential impact of gender, particularly the attendance of female managers based on their performance of VOEs. This research aims to address the existing knowledge gap by conducting a thorough examination of the involvement of female managers in Village-Owned Enterprises (VOEs) and their subsequent impact on firm performance. Furthermore, this study seeks to reveal valuable insight that could potentially reshape our comprehension of how gender dynamics meets with the intricate fabric of VOE operations. Through a meticulous analysis of various performance indicators, decision-making processes, and leadership styles, the research strives to uncover the extent to which the presence of female managers can contribute to positive outcomes within the VOE landscape. By employing a thorough and systematic approach, the study aims to provide a nuanced understanding of the potential connections between gender diversity and the overall performance trajectories of VOEs. Therefore, this investigation fills gaps by examining the role of females as VOE managers in influencing its performance.

The study makes a significant contribution to the literature in two crucial aspects. First, utilizing unique data from Indonesian VOEs offers a diverse perspective. Second, initiate the estimating impact of gender on firm performance, representing the initial effort in this vital research area. These innovative approaches enhance our comprehension of gender dynamics in the business context, providing valuable insights for future studies and potentially influencing policies promoting gender equality in the corporate sector.

2. Theoretical Underpinning

The theoretical framework aims to investigate the complicated relationship between gender diversity, particularly the attendance of female managers and the performance of Village-Owned Enterprises (VOEs) within the context of rural economic development in Indonesia. The main point from this framework focused on the overarching objective of advancing rural economic development, a key element in the strategic initiatives of the Indonesian government to elevate rural communities and foster overall national economic growth while tackling poverty. These initiatives involve various strategies consisting of the founding of Village-Owned Enterprises (VOEs) or known as '*Badan Usaha Milik Desa*' (*BUMDes*), recognized as legal entities formed through collaborations between villages and local administrative bodies. The Institute of VOEs is grounded in cooperation, participation, and community emancipation (Muryanti, 2020). Nevertheless, it has been observed that certain VOEs experience underperformance, attributed to the factors such as management issues, insufficient financial and human capital (Ma & Abdulai, 2017; Natsuda et al., 2012; Plakalović, 2015). Responding to these challenge, this framework suggests a dual-pronged strategies.

The Development of Human Capital: An essential approach involves improving the skills, literacy, and capabilities of Village-Owned Enterprise (VOE) members. The goal is to strengthen decision-making, operational efficiency, and overall performance by providing them with the necessary skills and knowledge (Mercer, Barker, & Bird, 2010). Human capital growth also emphasizes gender equality, requiring a focus on providing equal opportunities and empowerment for both male and female workers (Rao & Tilt, 2016). The relationship between Gender Diversity and Performance, based on extensive research on gender diversity's impact in corporate environments, this framework suggests that having a balanced representation of male and female managers within VOEs could lead to positive outcomes (Hicks-Clarke, Iles, & organizations, 2003). The studies on traditional corporate entities indicate that gender diversity contributes to improve decision-making, innovation, and competitiveness. However, the potential connection between gender diversity and VOE performance are still not widely explored (Agyapong & Attram, 2019; Han et al., 2021).

The comprehensive analysis of performance, decision-making processes, and leadership styles within VOEs are the indicators that investigates the extent framework to which the presence of female managers influences firm performance (Conyon & He, 2017). This exploration bonds a critical gap in our understanding of the unique dynamics at play within VOEs and how gender diversity might intersect with their operations through a meticulous and methodical investigation. This research endeavors to shed light on the previously uncharted territory of gender diversity's influence on VOE performance. Offering nuanced insights into the interactions between gender and VOE dynamics, the goal of this study is to contribute to the broader discourse on rural economic development and gender equality, ultimately informing policies that could drive positive transformation between the VOEs and their communities.

3. Research Methodology

3.1. Research Data

This study was performed in Blitar Regency, East Java Province of Indonesia. The selection is based on the availability of Village-Owned Enterprises (VOE) across the majority of its villages. The decision was done by taking a strategic step that was driven by the desire to explore and understand the existing dynamics within these Village-Owned Enterprises (VOEs). Focusing on Blitar Regency by SENSUS method to all the VOEs, we aimed to capture a representative of VOEs and their managerial practices, which provided a comprehensive view of their financial issue and operational strategies. To guarantee the overall comprehension, we utilized a detailed and careful research methodology. The attention to the depth examination was conducted, covering for each village in the Blitar Regency where Village-Owned Enterprises (VOEs) are in operation. This survey was done through an interview using a structured questionnaire with the VOE managers. The results of this extensive survey were scrutinized to derive precise and insightful conclusion regarding to the financial status and management approach of these VOEs.

3.2. Measuring VOE Performance

The measurement of Village-Owned Enterprise (VOE) performance was conducted by involving an interviews, meticulous document scrutiny, and systematic evaluation process for each VOEs. This strategy was carefully designed to ensure a depth examination that consider both of the organizational and financial

aspect. The evaluation process was condensed into the VOE Mapping Instrument, a complex framework that includes five crucial dimensions related to the finance and management. These dimensions encompass the growth ratio of capital, efficiency in utilizing capital, the quality of earning asset, the capacity for income generation, and the effectiveness of managerial practice. By analytically combining these factors, an accurate assessment of the overall health and operational efficiency of the VOE was made possible. By using an insights gathered from these key aspects, a summarized overview of the VOE's performance was created. Following this evaluative procedure, the performance of the VOE was thoughtfully classified into specific categories: 'healthy,' 'slightly healthy,' or 'needing improvement.' This meticulous are categorized nuanced understanding of the VOE's status, assisting stakeholder while making well-informed decisions to strengthen the vitality and success. So that, this comprehensive assessment framework function as an important tools to promote the progress, sustainability, and improve performance within the domain of Village-Owned Enterprises.

3.3. Data Analysis

In this study, the relationship between female managers and the performance of Village-Owned Enterprises (VOEs) was explored by using an ordinal profit model. This model was chosen since the VOE performance was classified into distinct ordinal category (Rahman et al., 2023), as represented in Table 1. The ordinal profit model allows us to analyse and understand how the presence of female managers influence of VOEs falling into different performance category (Arifin et al., 2020). By employing this specialized statistical approaches, we aim to provide a nuanced understanding of the impact that women in managerial roles have on the varying levels of VOE performance, to contribute in this comprehensive evaluation in this crucial relationship. Therefore, the equation is formulated as follows:

$$p_i^* = \varphi C_i + \beta X_i + e_i, \text{ with } S_i = \begin{cases} 1 & \text{if } p_i^* \leq C_1 \\ 1 & \text{if } C_1 < p_i^* \leq C_2 \dots \dots \dots (1) \\ z & \text{if } C_{z-1} \leq p_i^* \end{cases}$$

Where p_i^* denotes to VOE performance, X_i is characteristics variable, i.e., gender age, education, and asset; φ and β are represented as the parameters to be estimated; and e_i is a random error term. ∂_i And a_i are the parameters that to be estimated. e Is the error term.

4. Results and Discussion

4.1. Descriptive statistics

The selected variable and its definition were presented in Table 1. The result indicates that the average VOE performance is 1.168. This value implies on the average performance of VOE in our unhealthy or underperforming research location. The study by Nugroho (2020) also finds the similar result, they point out the majority VOE in East Java Province are not developed well. Therefore, it needs a special attention to improve their performance. Thus, it could improve the national economic growth. Based on their basic characteristics we indicate that 66.8% of our sample have a female manager that provide the education level is 7.8 years. This findings imply that the majority VOE managers was only graduated from elementary school. This education level is quite low for firm manager. Hence, they need to improve VOE human capital by providing training mainly for the managers with low education level. The average age of VOE manager is about 43 years old, and the average of total asset is about Rp14.000.000 with total employee 5-6 peoples. Suggesting this firm is categorized as small enterprise. Finally, the average age of VOE is about 9 years old. Some VOE have been built before the government regulation are announced, and it is organized by the village privately.

Table. 1 Descriptive statistic

Variable	Measurement	Mean	Std. Dev
Performance	1 Unhealthy; 2 Slightly healthy; very healthy	1.168	0.375
Gender	Dummy, 1 female; 0 male	0.668	0.472
Education	Managers' Education level in years	7.823	7.024
Age	Managers' age in year	43.123	10.960
Asset	Total asset owned in rupiah in 2021	14000000	11200000
Number of employee	Numbers of employee in 2021	5.436	2.380
Firm age	Firm age in year (2021)	9.455	4.205

4.2. The differences male and females' personality traits

The empirical results from profit order regression was presented in Table 2. The estimation was divided into three models, the first model was namely the pooled mode presents the influence of female manager, and characteristic variable on VOE performance. The second model namely the male model presents the determinant of VOE performance lead by male manager. The third model was the female model estimates the determinant of VOE performance lead by female manager.

Based on the result we indicates that female managers have a positive and significant impact on VOE Performance. Suggesting that VOE with female managers tend to have higher performance than the VOE with male manager. The findings from our study shed light on the intriguing the relationship between gender diversity in managerial positions and the performance of VOE (Village-Owned Enterprises) (Nekhili & Gatfaoui, 2013). The results is revealed that female manager has a positive impact on the performance of Village-Owned Enterprises (VOEs). This discovery challenges conventional assumption and emphasizes the importance of promoting gender inclusivity in leadership position (Opie et al., 2019). Furthermore, the VOEs being a crucial part for developing the rural economic development. It seems to experience the significant benefit from the diverse perspectives and approaches that female manager bring to the forefront. These results align with the increasing global recognition of the advantages linked to gender diversity in corporate and organizational context (Baselga-Pascual & Vähämaa, 2021).

The current VOE context is presented with a favourable opportunity to acknowledge an empirical evidence and implement policy that support the appointment and advancement of female manager. This shift do not only align with the principle of equality and justice but also has the potential principle to strengthen the socio-economic progress in rural communities. Although the research results indicates statistical significance, it is noted that there are additional factors at play, warranting further investigation. Considering contextual nuances, local cultural dynamics, and individual leadership qualities are crucial to gain a comprehensive understanding observed relationship between gender and VOE performance. This finding is in line with previous study by Martín-Ugedo and Minguez-Vera (2014) who found that female on the organization improved firm performance significantly. On the other hand, based on the pooled model, we indicate that education level improve performance significantly, implying that manager with the highest education level tend to increase VOE performance. The education is an essential aspect to improve human capital. The higher education of manager could provide better decision to manage their VOE as the results in increase their VOE performance. The age has a negative and significant impacts on VOE performance suggesting to the older managers tend to contribute to the higher Performa. Besides, based on male model the age is only provide a significant and positives impact on VOE performance. The main reason is because the older male tend to have higher experience of managing firm. Based on female model, we indicate that education are highly improve VOE performance. Therefore, we claimed that education is essential aspect that could improve female contribution on VOE performance, and it also could be used to improve woman empowerment while developing gender equality.

Table 2. Empirical results from ordered probit model

Variables	Pooled		Male		Female	
	Coef.	Std. Error	Coef.	Std. Error	Coef.	Std. Error
Gender	0.652	0.288**				
Education	0.128	0.027***	0.171	0.109	0.123	0.029***
Age	0.022	0.011**	0.050	0.027**	0.016	0.012
Asset	0.000	0.000	0.000	0.000	0.000	0.000
Number of employee	-0.010	0.052	0.047	0.123	-0.020	0.061
Firm age	-0.044	0.029	-0.095	0.065	-0.028	0.032

Note: *** sig at 1%; ** sig at 5

5. Conclusion

This study investigates the role of female manger on village owned enterprises performance by using an ordered profit model. The empirical findings of this study which delves into the impact of female manager on the performance of village-owned enterprises (VOEs), carry significant policy implications for fostering rural economic development and promoting gender equality. The utilization of an ordered profit model has yielded valuable insights, the unequivocally demonstrating that the presence of female managers

exerts a positive and statistically significant influence on VOE performance. The results of this research reveals the importance of gender in enhancing rural business outcome. The implication for policy include the need to interventions focused on shaping more diverse leadership, particularly by encouraging the participation of women in managerial role. These steps could be reinforced through doing some training, mentoring, and networking opportunities specifically tailored for female leaders. In addition, policy interventions should take into account that influence the demographic profiles and concentrate on the development of skill and knowledge of manager of both genders. This research also found that age is a crucial aspect as a determinant of managerial performance, emphasizing the need for policies that support the exchange of experiences and knowledge between generations of managers. By creating an environment that values the experiences of experienced managers and encourages collaboration across generations, policies can contribute to the growth and resilience of rural businesses. Nevertheless, this research has limitations as it solely focuses on the role of female managers. The future research could be broaden the scope by considering additional factors such as education background, industry experience, and managerial skill to gain comprehensive understanding of the factor that influence the rural business performance.

Credit authorsip contribution statement: **Tri Wahyu Nugroho:** Methodology, Writing – original draftValidation. Validation. Writing – review & editing.

Declaration of competing interest: No potential conflict of interest.

Data sharing: The data supporting the findings of this study can be obtained upon request.

Acknowledgments: The authors acknowledge to Faculty of Agriculture, Universitas Brawijaya.

Funding: Faculty of Agriculture, Universitas Brawijaya. No. 4108.35/UN10.F04/PN/2022.

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