

What is the Role of Motivation in Helping Rice Farmers Deal with Problems of Farm Business Performance and Welfare?

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Abstract

This study discusses the role of motivation within farmers in supporting rice farmers to continue to improve the performance of farming so as to improve the welfare of rice farmers in the midst of many problems related to supporting the production process in the form of production facilities and facilities and extreme climate factors as a result of el nino storms that cause extreme weather that hit Bali Province, especially Tabanan District. Extreme weather that makes hot temperatures that threaten the occurrence of drought on rice farms and also has an effect on the health of rice farmers as farming business actors. This should get a fairly serious handling in terms of how to motivate themselves as farmers in order to continue to improve the ability and farming techniques in improving the performance of farming. Improved farming performance will certainly be able to increase production yields that lead to an increase in income so that the welfare of rice farmers also increased. The rationale behind the selection of Tabanan Regency in the Bali Province as the research site lies in its distinction as possessing the most expansive rice plantation area among the eight regencies/cities within Bali Province. Additionally, Tabanan Regency holds the prestigious designation of being recognized as the primary granary of Bali Province. Employing a quantitative methodology, this study adopts a questionnaire-based approach. Furthermore, the analysis framework utilized is SEM-PLS (Structural Equation Modelling Partial Least Square), involving a cohort of 167 respondents. The empirical results gleaned from this investigation indicate that the performance of farms serves as a mediating factor in the relationship between farmers' motivation and their welfare within the rice farming community of Tabanan Regency.

Keywords: Motivation, Farm Business Performance, Rice Farmer Welfare, Rice Crop.

INTRODUCTION

Agriculture plays a pivotal role in bolstering the national economy, particularly in fostering food security, enhancing competitiveness, facilitating labor absorption, and mitigating poverty. Furthermore, it serves as a catalyst for the development of downstream agro-industries and stimulates the exportation of agricultural commodities, thereby fostering economic growth on the contrary, fulfilling the nutritional requirements of the populace poses a substantial challenge, particularly in light of projections indicating that Indonesia's population is anticipated to reach 330.9 million individuals by 2050, positioning it as the sixth most populous nation globally, following India, China, Nigeria, the United States, and Pakistan (United Nations Population, 2019), as articulated in the Ministry of Agriculture's Strategic Plan 2020-2024. Moreover, Law No. 18/2012 concerning food underscores the significance of addressing this imperative "the condition of food fulfillment is reflected in the availability of sufficient food, both in quantity and quality, safe, diverse, nutritious, equitable, and affordable and does not violate religious beliefs, community culture, to live healthy, productive and active, in a sustainable manner". Given this context, the welfare of rice farmers emerges as a crucial concern for the government. The pursuit of rice self-sufficiency is integral to upholding Indonesia's food security and sovereignty. However, various phenomena, such as the marginalization of the farming profession, characterized by low income and high occupational risks, coupled with perceptions among younger demographics that agricultural work is less desirable due to its perceived uncleanness, undermine the attractiveness of the agricultural sector to the youth. These perceptions contribute to diminishing interest among the younger generation to pursue careers in agriculture, posing challenges to sustaining the agricultural workforce essential for achieving food security objectives.

The rice farming industry in Bali Province, particularly in Tabanan Regency, holds the esteemed title of being the granary of the region. This distinction is attributed to Tabanan Regency's extensive rice fields, surpassing those of its counterparts in other districts/cities. Moreover, Tabanan Regency earned global recognition in 2012 when it was designated as a UNESCO World Cultural Heritage site, owing to its distinctive irrigation and subak systems. These unique features serve as the cornerstone for preserving both the natural environment and the rice farming tradition in Tabanan Regency. However, despite this invaluable asset, observations reveal a significant deficiency in human resources essential for sustaining the agricultural sector. Furthermore, the continuous decline in natural resources, particularly agricultural land, due to land conversion poses additional challenges to the longevity of rice farming in the region.

In addition, the decline in rice productivity in Tabanan Regency greatly affects the welfare of rice farmers. A decrease in rice productivity results in reduced farmer income so that farmer welfare will also decline. The welfare of farmers, which until now has not been realized according to the expectations of farmers, is due to the costs incurred for production that are not certain to be recovered after the harvest season due to the possibility of crop failure due to weather, pests and other factors (Listiana, 2017). Yacoub (2020) states that as an area that has relatively large agricultural land, villagers living in rural areas should be able to live prosperously and prosperously. The poverty experienced by rice farmers is explained by Mulda (2017) as a very sad social reality. The life of farmers where they have to wait for the harvest season to arrive for months in the harvest process they have to sacrifice a lot of time, energy, and material so that they can harvest their agricultural products and sometimes they have to face failure if the season or pests are unfriendly.

Improving farm performance and farmer welfare is influenced by motivation from within the farmer to develop farming capabilities in creating a new innovation so that the crops produced by farmers are not monotonous and experience a significant increase, while factors from outside the farmer itself such as weather factors that can cause crop failure so that farmers experience losses (Damanik, 2014). Economic improvement of families who have sufficient knowledge will be closer to welfare and family functions such as protection, and child education will run well (Akram, 2003). According to Ebere (2014) in addition to problems regarding farmers' knowledge in agriculture, the problem of using production factors is also a major problem in agriculture faced by farmers. A large business will also require more labor so as to further increase income (Sasmitha, 2017). The motivation of agricultural workers is mainly shaped by the practical knowledge and involvement of farmers in their duties. Without this intrinsic drive, farmers encounter challenges in optimizing their production output, even when one of the production factors is readily available. However, the mere abundance of individual factors does not suffice without the concurrent presence of complementary factors essential for bolstering agricultural productivity. Managing a good farming business is highly dependent on the motivation of farmers because motivation is one of the indirect means of improving the standard of living of farmers. The higher the motivation of farmers in farming is expected to be able to manage farming businesses well which will be able to increase farmers' income so that their welfare also increases (Mwaura, 2014).

Several phenomena faced by farmers related to motivation, namely the first problem related to increasing motivation in rice farmers to improve their living standards through improving farm business performance. This research gap also arises starting when Covid 19 occurs, where the number of workers in the agricultural sector has increased due to the transition of professions in the tourism sector affected by covid to become farmers. However, the addition of labor during the period 2020 to 2021 did not increase rice productivity in Tabanan Regency, following the normalization of conditions in 2022, there was a significant decline in the number of workers within the agricultural sector. The decrease can be ascribed to individuals who were laid off during the Covid-19 period choosing to rejoin the workforce in the tourism sector. This indicates that the change in profession is prompted by external circumstances, suggesting a sense of compulsion rather than stemming from personal motivation. This scenario serves as the foundation for researchers to investigate the significance of motivation among farmers in their farming practices to attain welfare.

One form of *inner* motivation from farmers to remain in the agricultural sector, is to work to the Goddess of Fertility in the form of the *biyukukung* ceremony. The *biyukukung* ceremony is one of a series of *Dewa Yajna* ceremonies. The *biyukukung* ceremony is a ceremony aimed at rice plants that will grow fruit or rice that is pregnant. The *biyukukung* ceremony is in accordance with the teachings of Hinduism and community beliefs carried out so that later the rice grows fertile and the harvest is abundant. This *biyukukung* ritual is a ritual to

eliminate danger (for safety) of pregnant rice and is ready to give birth (Bandana, et al. 2010). This is what makes researchers interested in exploring more deeply the role of motivation in assisting farmers in overcoming the problems of farm performance and welfare of rice farmers in Tabanan district.

LITERATURE REVIEW AND HYPOTHESIS

Expectancy Theory of Motivation

Victor H. Vroom introduced this theory in 1964, diverging from the focus on needs outlined by Maslow and Herzberg in Anggraini et al. (2019). Vroom's theory emphasizes outcomes over needs and revolves around three key assumptions: Firstly, individuals believe that certain behaviors lead to specific outcomes, termed as outcome expectancy, representing their subjective assessment of the likelihood of outcomes resulting from their actions. Secondly, each outcome holds a degree of value or attractiveness to individuals, known as valence, indicating the value assigned to an expected outcome. Lastly, each outcome is associated with a perception of the effort required to achieve it, termed effort expectancy, representing the likelihood that one's effort will lead to achieving a particular goal. According to this theory, the motivation driving an individual's effort in their job depends on the reciprocal relationship between desired outcomes and the effort needed to attain them.

The Effect of Motivation Regarding the Well-Being of Rice Cultivators

Welfare is a subjective concept, wherein each household or individual holds distinct standards, objectives, and lifestyles, thus attributing differing values to the determinants of welfare (Badrudin, 2012). Among the factors influencing farmers' welfare is motivation. This is due to the direct correlation between farmers' motivation levels and the optimization of production processes regarding time efficiency and enhanced yields, consequently enhancing the well-being of rice cultivators. Studies conducted by Maurer et al. (2021), Ufer et al. (2022), and Owusu-Sekyere et al. (2022) have corroborated the positive impact of motivation on farmer welfare.

H₁: Motivation positively influences the welfare of rice farmers

The Impact of Motivation on Agricultural Business Performance

Robbins (cited in Sunyoto, 2015: 179) defines motivation as the willingness to exert optimal effort in attaining organizational objectives, influenced by the capacity of efforts to fulfill individual needs. Therefore, motivation serves as a driving force prompting individuals to strive towards achieving business goals, propelled by the effectiveness of their efforts in meeting personal needs. This suggests that heightened motivation to accomplish business objectives can enhance farming performance. Research conducted by Owusu-Sekyere et al. (2022), Kansime et al. (2020), and Leach et al. (2010) affirms that farmers' motivation can bolster their enthusiasm in adopting agricultural technology to support production processes, thereby improving farm performance.

H₂: Motivation positively influences farm performance

The Impact of Agricultural Business Performance on the Welfare of Rice Farmers

Agriculture entails the culmination of efforts in utilizing various production factors to maximize agricultural yield (Rivai, 1980). This encompasses the utilization of natural resources, labor, capital, and technology in cultivating agricultural land, resulting in amplified income and improved welfare. Augmented farm performance leads to heightened agricultural output, thereby enhancing the welfare of farmers. Studies conducted by Situmorang et al. (2020) and Hassan et al. (2020) highlight the importance of sustaining the availability of production factors to ensure seamless agricultural operations. This facilitates unimpeded production processes, leading to heightened production, sales, and income, thereby facilitating an automatic increase in farmers' welfare.

H₃: Farm performance of rice farmers positively influences their welfare

The Impact of Motivation on the Welfare of Rice Farmers via Agricultural Business Performance

Farming performance is able to increase motivation in farmers to be more active in running the farming business so that the welfare of farmers will also increase. This is because with good farm performance, it will motivate farmers to build motivation within themselves to try their best in carrying out the production process, and make various efforts to improve their abilities that can support all production processes and in the process of marketing production so that it will have an impact on increasing income which results in the welfare of farmers also

increasing. Research conducted by Efendy & Balai (2014), Ninomiya (2004), and Hatta et al. (2017) indicates that favorable farm performance can serve as a mediator for the influence of motivation on the welfare of rice farmers.

H4: Farm performance acts as a mediator for the impact of motivation on the welfare of rice farmers

METHODS

Types of Research

This study employs a quantitative research methodology utilizing a structural equation modeling approach, facilitated by SmartPLS software, to validate the formulated hypothesis. The research investigates the relationship between a single variable, referred to as the dependent variable, and explanatory variables with the mediation of an intermediate variable. The primary objective of this study is to empirically test the hypotheses derived from existing theories and prior research findings.

Research Variables

This study encompasses three variables: the variables examined in the study consist of the independent variable, the dependent variable, and an intermediate variable. The dependent variable in focus is the welfare of rice farmers. Welfare is conceptualized as a structured system of social services and institutions designed to assist individuals and groups in achieving satisfactory standards of living and health. It encompasses individual and social relationships conducive to the development of all abilities, thereby enhancing the welfare of farmers in line with the needs of their families and society (Rukminto, 2013). According to Albert and Hannel (2005), and as reported by the Central Bureau of Statistics in 2000, there are seven indicators used to assess the welfare of rice farmers. These indicators include income structure, expenditure on food, purchasing power of farming households, and food security of farming households, accessibility to education for children, availability of health services, and home or living conditions.

The primary focus of this study is motivation, which can be characterized as the driving force compelling individuals to pursue business goals or objectives, influenced by the business's capability to fulfill various individual needs (Sunyoto, 2015: 179). As Sunyoto (2015) and Grant and Shandell underscore, motivation serves as the impetus for individuals to strive towards achieving business objectives (2022), motivation is gauged using indicators such as financial reasons, social reasons, self-fulfillment reasons, service reasons, and gratitude. Acting as an intermediary in this study is farm performance, which refers to the productivity and efficiency of farmers in their agricultural endeavors, encompassing both the quality and quantity of output achieved within a specified timeframe (Puspitasari et al., 2019). The assessment of farm performance in this study relies on four criteria outlined by Jauch and Glueck (1998), which include production, sales, and business profits.

Stages of Hypothesis Testing

The gathered data from responses to the research questionnaire were condensed, accompanied by details regarding the respondents' count. Quality assessment of the data ensued through validity and reliability examinations involving 167 participants. Validity checks were carried out to ensure data precision and the suitability of each questionnaire statement in representing the targeted variable. Similarly, reliability tests were undertaken to confirm the uniformity of responses among the 167 participants. The process of hypothesis testing was executed in two phases: direct effect testing and indirect effect testing. Within this study, three hypotheses pertaining to direct effects and one hypothesis concerning indirect effects will be scrutinized. These hypotheses will undergo testing employing Smart PLS software.

RESULTS AND DISCUSSION

Feasibility Test Data

The research population consists of rice farmers located in Tabanan district, Bali province, with a total of 2,576 individuals distributed across 10 sub-districts: Selemadeg, Kerambitan, Tabanan, Kediri, Marga, Baturiti, Penebel, Pupuan, West Selemadeg, and East Selemadeg. A sample of 167 rice farmers was chosen to participate in the questionnaire survey.

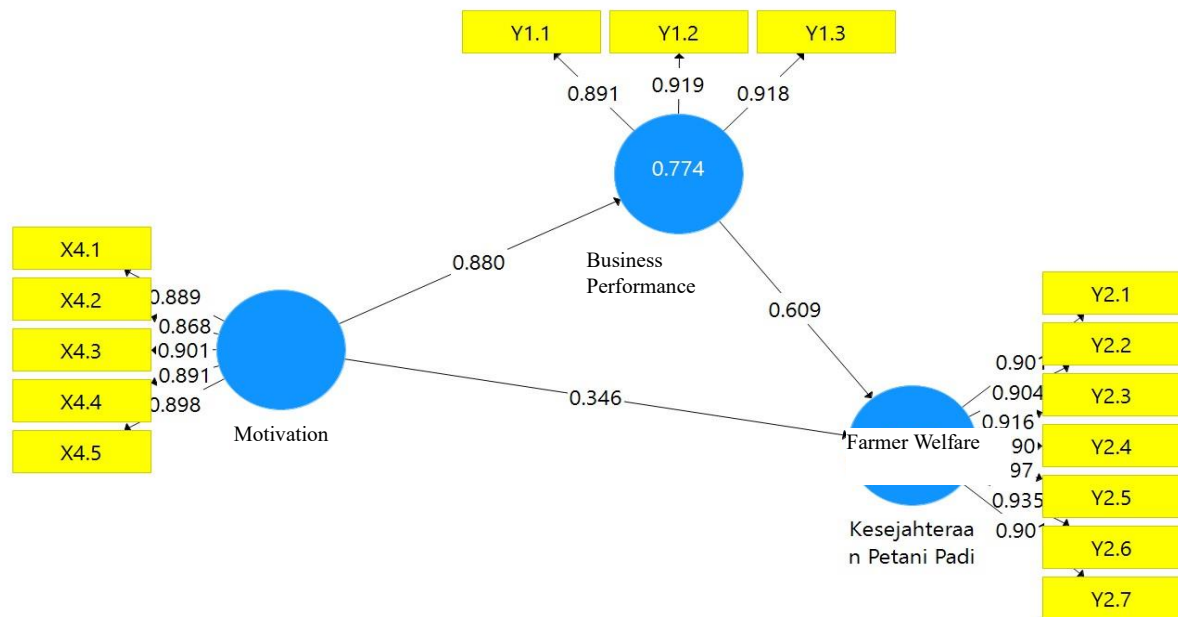


Figure 1. Validity Test

Source: Smart PLS, 2023

Figure 1 illustrates that all indicators for each variable demonstrate a factor loading value surpassing 0.5, affirming the validity and appropriateness of all questionnaire statements in representing the investigated variables. Moreover, the results in Figure 1 disclose that the coefficient of determination for farm performance stands at 0.774, equivalent to 77.4%, indicating that 77.4% of the variability in farm performance can be elucidated by the motivation variable. The residual 22.6% is attributed to other variables not encompassed within this research framework. Additionally, the coefficient of determination for the welfare of rice farmers is depicted at 0.862, or 86.2%, signifying that 86.2% of the variance in rice farmers' welfare can be explicated by both the motivation variable and farm performance. The residual 13.8% is attributed to additional variables not included in this research framework.

Table 1
Reliability Test

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Rice Farmer Welfare	0,964	0,964	0,970	0,821
Farming Business Performance	0,895	0,897	0,935	0,827
Motivation	0,934	0,935	0,950	0,791

Source: Smart PLS, 2023

Composite reliability serves as an index to evaluate the internal consistency of a measurement instrument, assessing the accuracy, consistency, and precision of measurements (Hair et al., 2017). As depicted in Table 1, all latent variables in this study demonstrate Cronbach's alpha and Composite Reliability values surpassing 0.7. Thus, it can be deduced that all latent variables exhibit reliability.

Hypothesis Testing

Hypothesis testing comprises two types: direct effect testing and indirect effect testing were conducted as part of this study. Direct effect tests were carried out to investigate the three hypotheses proposed in this study, while the indirect effect test was executed to address the hypothesis under examination. Below are the outcomes of the direct effect test.

Table 2 Direct Effect Test

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
Farm Business Performance -> Rice Farmer Welfare	0,609	0,600	0,089	6,849	0,000
Motivation -> Rice Farmer Welfare	0,346	0,356	0,090	3,852	0,000
Motivation -> Farming Business Performance	0,880	0,879	0,025	35,156	0,000

According to the findings presented in Table 2, the direct effect test yields the following conclusions: Initially, motivation demonstrates a positive and significant impact on the welfare of rice farmers, as evidenced by an original sample value of 0.346 and a P-value of 0.000, which falls below the predetermined significance level of 0.05. Consequently, these results support the first hypothesis of this study, confirming its validity. These findings align with and supplement the outcomes of research conducted by Jambo et al. (2019), Abdollahzadeh and Sharifzadeh (2021), along with Abdul-Rahaman and Abdulai (2018), both support the notion that motivation positively and significantly impacts the welfare of rice farmers. Therefore, enhancing farmers' motivation through various means, including self-motivation to enhance farming skills, is likely to yield significant improvements in farmers' welfare.

The second finding indicates that motivation positively and significantly impacts farm business performance, as evidenced with an original sample value of 0.880 and a P-value of 0.000, the observed effect falls below the significance threshold of 0.05. These results validate the second hypothesis posited in this study. The outcomes align with the research conducted by Matondang et al. (2021) and Owusu-Sekyere et al. (2022), which concluded that consistent motivation among organizational members leads to enhanced farming performance. Additionally, studies by Kansime et al. (2020) and Leach et al. (2010) have underscored the pivotal role of motivation in farmers' decisions, influencing their perseverance in agricultural endeavors and their efforts to enhance farm performance even in the face of suboptimal production outcomes.

The third observation reveals that farm performance positively and significantly influences the welfare of rice farmers, denoted by an original sample value of 0.499 and a P-value of 0.000, falls below the threshold of 0.05. Thus, the third hypothesis of this study is validated and approved. These results support and strengthen the conclusions drawn from studies conducted by Ramdhani et al. (2015), Hassan et al. (2020), and Jääskeläinen et al. (2014), which demonstrated the positive and significant impact of farm business performance on farmers' welfare. This implies that any endeavors aimed at enhancing farm performance will yield noteworthy benefits for farmers' welfare. Farm performance encompasses the growth of agricultural production, increases in sales volume, and improvements in profit/income. Therefore, maintaining high farm performance is crucial for ensuring stability and enhancing farmers' welfare.

Table 3 Indirect Effect Test

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
Motivation -> Farming Business Performance -> Welfare of Rice Farmers	0,536	0,527	0,075	7,161	0,000

From the presented table, it can be inferred that in the indirect effect testing, farm performance acts as a mediator for the influence of motivation on the welfare of rice farmers. This is affirmed by an original sample value of 0.536 and a P-value of 0.000, both of which are below the significance threshold of 0.05. Hence, the fourth hypothesis of this study is confirmed and endorsed. These findings align with and enhance the research outcomes of Owusu-Sekyere et al. (2022), Leach et al. (2010), and Kansime et al. (2020), which similarly concluded that farm performance acts as a mediator for the influence of motivation on farmers' welfare. This implies that any endeavors aimed at enhancing farm performance will influence the impact of motivation on farmers' welfare. The significance of motivation in farmers is pivotal for sustaining their dedication to the profession and encouraging continuous efforts to enhance welfare through improved farm performance.

CONCLUSIONS

The initial finding of this study indicates a positive and notable correlation between motivation and the welfare of rice farmers. This implies that heightened motivation among farmers contributes to increased agricultural productivity, thereby enhancing the welfare of farmers. Additionally, the second finding underscores the constructive impact of motivation on farm performance. In essence, strong motivation among farmers fosters a culture of creativity and innovation in farming practices, leading to improvements in farm performance. The third outcome indicates a positive and significant relationship between farm performance and the welfare of rice farmers. This suggests that improvements in farmers' performance, such as enhancing production yields, increasing sales volume, and boosting income, contribute to an overall improvement in the welfare of rice farmers. The fourth finding of this study highlights that farm performance serves as a mediator in the relationship between motivation and the welfare of farmers. This implies that endeavors aimed at enhancing farm performance will exert an influence on how motivation affects the welfare of farmers. This means that the performance of the farm business is able to motivate farmers in farming by attending training held by the government in an effort to improve their ability to support the production process so that it will be able to increase production yields and improve the welfare of rice farmers.

REFERENCES

1. Abdul-Rahaman, A., & Abdulai, A., 2018. Do farmer groups impact on farm yield and efficiency of smallholder farmers? Evidence from rice farmers in northern Ghana. *Food policy*, 81, 95-105. <https://doi.org/10.1016/j.foodpol.2018.10.007>
2. Abdollahzadeh, G., & Sharifzadeh, M. S. (2021). Predicting farmers' intention to use PPE to prevent pesticide adverse effects: an examination of the health belief model (HBM). *Journal of the Saudi Society of Agricultural Sciences*, 20(1), 40-47. <https://doi.org/10.1016/j.jssas.2020.11.001>
3. Akram, W. (2003). Does Agricultural Credit Affect Production Efficiency. *Pakistan Economic and Social Review*, 51(2).
4. Albert, M., & Hahnel, R. (2005). Traditional Welfare Theory. *A Quiet Revolution in Welfare Economics*, 19.
5. Anggraini, D., Muchtar, B., & Masdupi, E. (2019). Effect of Remuneration, Work Motivation and Organizational Commitment to Job performance. In *2nd Padang International Conference on Education, Economics, Business and Accounting (PICEEBA-2 2018)* (pp. 407-415). Atlantis Press.
6. Badrudin, R. (2012). *Economics of Regional Autonomy*. Yogyakarta: UPP STIM YKPN.
7. Bandana, S. et al. (2010). Agricultural Ritual Discourse as an Effort to Preserve Balinese Language and Culture: An Ethnological Linguistic Study. *Research Report of the Ministry of National Education Language Center*.
8. Damanik, J. A. (2014). Analysis of Factors Affecting the Income of Rice Farmers in Masaran District, Sragen Regency. *Economics Development Analysis Journal*, 3(1).
9. Ebere, C., & Osundina, K. C. (2014). Government expenditure on agriculture and economic growth in Nigeria. *International Journal of Science and Research*, 3(9), 188-194.
10. Efendy, J., & Balai, Y. H. (2014). Analysis of Adoption of Rice-Based Agricultural Technology Innovations in South Sumatra from a Communication Perspective. *Journal of Agricultural Technology Assessment and Development*, 13(2), 119-130.
11. Grant, A. M., & Shandell, M. S. (2022). Social motivation at work: the organizational psychology of effort for, against, and with others. *Annual review of psychology*, 73, 301-326.
12. Hair, J. F. Jr., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2017). *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*. SAGE Publication Inc.
13. Hassan, S. Z., Jajja, M. S. S., Asif, M., & Foster, G. 2020. Bringing more value to small farmers: a study of potato farmers in Pakistan. *Management Decision*, 1165265.
14. Hatta, M., Burhansyah, R., Kifli, G. C., Dewi, D. O., Kilmanun, J. C., Permana, D., ... & Widiastuti, D. P. (2023). Food self-sufficiency: Managing the newly-opened tidal paddy fields for rice farming in Indonesia (A case study in West Kalimantan, Indonesia). *Heliyon*, 9(3).

15. Jääskeläinen, T., Kauppinen, T., Vesala, K. M., & Valros, A. (2014). Relationships between pig welfare, productivity and farmer disposition. *Animal Welfare*, 23(4), 435-443.
16. Jambo, I. J., Groot, J. C., Descheemaeker, K., Bekunda, M., & Tiftonell, P. (2019). Motivations for the use of sustainable intensification practices among smallholder farmers in Tanzania and Malawi. *NJAS Wageningen Journal of Life Sciences*, 89, 100306.
17. Jauch, L. R. & Glueck, W. F. (1998). *Business Policy and Strategic Management*. Singapore: McGraw-Hill.
18. Kansiiime, M. K., Mugambi, I., Migiro, L., Otieno, W., & Ochieng, J. (2020). Farmer participation and motivation for repeat plant clinic use: Implications for delivery of plant health advice in Kenya. *Cogent Environmental Science*, 6(1), 1750539.
19. Leach, K. A., Whay, H. R., Maggs, C. M., Barker, Z. E., Paul, E. S., Bell, A. K., & Main, D. C. J. (2010). Working towards a reduction in cattle lameness: Understanding dairy farmers' motivations. *Research in veterinary science*, 89(2), 318-323.
20. Listiana, I. (2017). Farmers' capacity in implementing integrated pest management (IPM) technology for paddy rice in Situgede Village, Bogor City. *Agrica Ekstensi*, 11(1), 46-52.
21. Matondang, M. H., Absah, Y., & Lubis, A. N. (2021). The Effect of Trust in Leader and Communication on Employee Performance through Motivation PT. Herfinta Farm and Plantation. *International Journal of Research and Review*, 8(1), 663-672.
22. Maurer, L., Schenkenfelder, J., & Winckler, C. (2021). Resource, Collaborator, or Individual Cow? Applying Q Methodology to Investigate Austrian Farmers' Viewpoints on Motivational Aspects of Improving Animal Welfare. *Frontiers in Veterinary Science*, 7, 607925.
23. Mulda, R. (2017). Concept and Direction of Government Policy in Agricultural Development in Indonesia. *Trias Politika*, 1(2).
24. Mwaura, F. (2014). Effect of Farmer Group Membership on Agriculture Technology Adoption and Crop Productivity in Uganda. *African Crop Science Journal*, 22(4), 917-927.
25. Ninomiya, S. (2004). *Successful information technology (IT) for agriculture and rural development. January 2004*, 1-19.
26. Owusu-Sekyere, E., Hansson, H., & Telezhenko, E., 2022. Use and non-use values to explain farmers' motivation for the provision of animal welfare. *European Review of Agricultural Economics*, 49(2), 499525.
27. Puspitasari, N., Nurmalina, R., Fariyanti, A., & Kiloos, A. M. 2019. *Effect of Internal and External Factors Towards the Entrepreneurial Behavior of Orchid Growers*. *Journal of Horticulture*, 28(2), 299.
28. Ramdhani, H., Nulhaqim, S. A., & Fedryansyah, M. (2015). Improving Farmers' Welfare by Strengthening Farmer Groups. *Proceedings of Research and Community Service*, 2(3), 423-429.
29. Rivai, B. (1980). *Farming Science*. Erlangga: Jakarta
30. Rukminto, A. (2013). *Community Intervention & Community Development as a Community Empowerment Effort*. Jakarta: RajaGrafindo Persada.
31. Sasmitha, R. (2017). Factors Affecting the Income of Craftsmen in the Bamboo Craft Industry in Belega Village, Gianyar Regency. *E-Journal of Development Economics, Udayana University*, 6(1), 1-114.
32. Situmorang, S., Haryono, D., & Soelaiman, A. (2020). Analysis of Farm Performance and Welfare of Vegetable Farmers in Pagar Alam City, South Sumatra Province. *Indonesian Journal of Socio Economics*, 1(2), 8492.
33. Sunyoto, D. (2015). *Human Resource Management*. Yogyakarta: Center for Academic Publishing Service.
34. Ufer, D. J., Ortega, D. L., Wolf, C. A., McKendree, M., & Swanson, J. (2022). Getting past the gatekeepers: Key motivations of dairy farmer intent to adopt animal health and welfare-improving biotechnology. *Food Policy*, 112, 102358.
35. Yacoub, Y. (2020). Analysis of Farmer Welfare and Rural Poverty in Indonesia. *Proceedings of the 2020 Annual Academic Seminar on Economics and Development Studies*, 92-102.