

The Effect of Financial Literacy toward Farmers Financial Behavior and Financial Performance: Evidence from Indonesian Horticulture Farmers

Dwi Retnoningsih¹, Rebecca H. Chung¹

¹Department of Tropical Agriculture and International Cooperation,
National Pingtung University of Science and Technology, Pingtung, 91201, Taiwan

Abstract

The role of financial literacy on agriculture development is reportedly likely to substantially influence farmer financial behavior to decide to adopt credits and savings and also influence financial performance in production and marketing performance. Hence, this study aims to estimate the effect of financial literacy on financial behavior and financial performance. Cross-sectional data, collected from 450 smallholder horticulture farmers in East Java, Indonesia, was analysed using a Tobit regression model to determine the factors affecting farmers financial literacy. The Instrumental Variable method of the Probit model (IV-Probit) and Instrumental Variable Regression (IV-Regression) was applied to estimate the effects of financial literacy on financial behavior. Instrumental Variable Quantile Regression (IVQR) was employed to analyze the effect of financial literacy on financial performance. Financial behavior was measured by farmers' decision to adopt credits and savings, whereas financial performance was measured by net returns, return on investment (ROI), and profit margin. Preliminary results indicated that financial literacy had a positive and significant effect on farmers' decision to adopt credits and savings. However, there were two expected results in our exploration; firstly, financial literacy was affected by education, age, and farmer group participation; and secondly, financial literacy positively and significantly affected net returns, ROI, and profit margin across the selected quantiles. Therefore, the arrangement of more financial literacy should be supported by the government for smallholder farmers in Indonesia.

Keywords: Financial literacy, financial behavior, financial performance, horticulture farmers, Indonesia



March 1, 2022

References

- Allgood, S., & Walstad, W. B. 2016. The effects of perceived and actual financial literacy on financial behaviors. *Economic inquiry*, 54(1), 675-697.
- Ankrah Twumasi, M., Jiang, Y., Adhikari, S., Adu Gyamfi, C., & Asare, I. 2021. Financial literacy and its determinants: the case of rural farm households in Ghana. *Agricultural Finance Review*.
- Bizikova, L., Nkonya, E., Minah, M., Hanisch, M., Turaga, R. M. R., Speranza, C. I., ... & Timmers, B. 2020. A scoping review of the contributions of farmers' organizations to smallholder agriculture. *Nature Food*, 1(10), 620-630.
- Cole, S., Sampson, T., Zia, B. 2009. Financial literacy, financial decisions, and the demand for financial services: evidence from India and Indonesia. Working Paper 09-117. *Harvard Business School*.
- Dahmen, P., & Rodríguez, E. 2014. Financial Literacy and the Success of Small Businesses: An Observation from a Small Business Development Center. *Numeracy: Advancing Education in Quantitative Literacy*, 7(1).
- D.A.T, K. 2020. The Impact of Financial Literacy on Investment Decisions: With Special Reference to Undergraduates in Western Province, Sri Lanka. *Asian Journal of Contemporary Education*, 4(2), 110-126.
- Dasgupta, Tapashi. 2015. A sneak peek into financial literacy and investment: a case study of working women in Nagaland. *Online International Interdisciplinary Research Journal* Vol. V. Department of Commerce. ICAFI University. Nagaland & Research Scholar. Assam University. India.
- Farris, P. W., N. T. Bendle, P. E. Pfeifer, and D. J. Reibstein. 2010. Marketing metrics: The definitive guide to measuring marketing performance. *Upper Saddle River NJ: Pearson Education*.
- Gaurav, S., & Singh, A. 2012. An inquiry into the financial literacy and cognitive ability of farmers: Evidence from rural India. *Oxford Development Studies*, 40(3), 358-380.
- Grohmann, A. 2018. Financial literacy and financial behavior: Evidence from the emerging Asian middle class. *Pacific-Basin Finance Journal*, 48, 129-143.
- Grohmann, A., Klühs, T., & Menkhoff, L. 2018. Does financial literacy improve financial inclusion? Cross country evidence. *World Development*, 111, 84-96.
- Hailwood, K. and Widdowson, D. 2007. Financial literacy and its role in promoting a sound financial system. *Reserve Bank of New Zealand Bulletin*, 70(2).
- Hakim, M. S., Oktavianti, V., & Gunarta, I. K. 2018. Determining factors that contribute to financial literacy for small and medium enterprises. *IOP Conference Series: Materials Science and Engineering*, 337, 012064.
- Hilgert, Marianne, and Jeanne Hogarth. 2002. Financial Knowledge, Experience and Learning Preferences: Preliminary Results from a New Survey on Financial Literacy. *Consumer Interests Annual*: 48: 1-7.
- Houston, SJ. 2010. Measuring financial literacy. *Journal of Consumer Affairs* Volume 44 Issue 2.
- Lusardi, A., & Mitchell, O. S. 2014. The Economic Importance of Financial Literacy: Theory and Evidence. *Journal of Economic Literature*, 52, 5-44.
- Ma, W., Nie, P., Zhang, P., & Renwick, A. 2020. Impact of Internet use on economic well-being of rural households: Evidence from China. *Review of Development Economics*, 24(2), 503-523.

- Ma, W., Zheng, H., Zhu, Y., & Qi, J. 2021. Effects of cooperative membership on financial performance of banana farmers in China: A heterogeneous analysis. *Annals of Public and Cooperative Economics*, 93(1), 5–27.
- Mabula, J. B., and Dong, H. 2018. Financial literacy of SME managers' on access to finance and performance: the mediating role of financial service utilization. *International Journal of Advanced Computer Science and Applications*, 9(9).
- Murendo, C., & Mutsonziwa, K. 2016. Financial literacy and savings decisions by adult financial consumers in Zimbabwe. *International Journal of Consumer Studies*, 41(1), 95–103.
- Oanea, D.-C., and Dornean, A. 2012. Defining and Measuring Financial Literacy. New Evidence from Romanian' Students of the Master in Finance. *Annals of the Alexandru Ioan Cuza University - Economics*, 59(2).
- Remund, D. L. 2010. Financial literacy explicated: The case for a clearer definition in an increasingly complex economy. *Journal of Consumer Affairs*, 44(2), 276-295.
- Sang, N. C., & Cheruiyot, J. K. 2020. Farmers' information literacy and productivity performance of smallholder horticulture in a highland zone, Kenya. *J Sci Res Rep*, 26(6), 89-99.
- Sayinzoga, A., Bulte, E.H. & Lensink, R. 2016. Financial literacy and financial behaviour: experimental evidence from rural Rwanda. *The Economic Journal*, 126, 1571–1599.
- Ugwuja, V. C., & Onwuachu, O. E. 2020. Assessment of Farm Financial Literacy Levels among Poultry Farmers in Anambra State, Nigeria. *Nigerian Agricultural Policy Research Journal (NAPReJ)*, 7(2237-2021-1449), 43-48.
- Wulandari, E., Meuwissen, M. P., Karmana, M. H., & Lansink, A. G. O. 2017. Performance and access to finance in Indonesian horticulture. *British Food Journal*, 119 (3), 625 – 638.
- Xu, N., Shi, J., Rong, Z., & Yuan, Y. 2020. Financial literacy and formal credit accessibility: Evidence from informal businesses in China. *Finance Research Letters*, 36, 101327, 1-6.