

**ADOPTION OF MICROFINANCE DIGITAL INNOVATION
SERVICES IN THE AGRICULTURE SECTOR IN GHANA**

DISSERTATION

Submitted to Meet in Part the Requirements of Doctoral Degree
at Management Study Program



by
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**DOCTOR OF MANAGEMENT STUDY PROGRAM
FACULTY OF ECONOMIC AND BUSINESS EDUCATION
UNIVERSITAS PENDIDIKAN INDONESIA
2023**

Raymond Akantege, 2023

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**ADOPTION OF MICROFINANCE DIGITAL INNOVATION SERVICES IN
THE AGRICULTURE SECTOR IN GHANA**

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DECLARATION

I hereby declare that this dissertation entitled “**Adoption of Microfinance Digital Innovation Services in the Agriculture Sector in Ghana**” and all its contents are truly my own work. I do not plagiarize or quote in ways that violate the scientific ethics that apply in the scientific community. I am ready to bear the risk/sanction if in the future there is a violation of scientific ethics or there is a claim against the authenticity of my work.

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ACKNOWLEDGEMENT

I wish to convey my profound thanks and heartfelt appreciation to numerous individuals and institutions whose invaluable support significantly facilitated the successful culmination of my doctoral dissertation. Foremost among them are:

1. Rector of UPI, Prof. Dr. H. M. Solehuddin, M.Pd., M.A.
2. Dean of FPEB, Prof. Dr. H. Eeng Ahman, M.Si
3. Head of the Management Masters and Doctoral study programs, Dr. Maya Sari, S.E, M.M.
4. Promoter, Prof. Dr. H. Agus Rahayu, M.P., for his invaluable guidance, support, and expertise throughout the research process. His unwavering commitment and encouragement have been instrumental in shaping the direction of this study. His expertise and guidance have greatly enriched the quality of this study.
5. Kopromoter, Dr. Chairul Furqon S. Sos. MM, for his invaluable guidance, support, and expertise throughout the research process. His unwavering commitment and encouragement have been instrumental in shaping the direction of this study. His expertise and guidance have greatly enriched the quality of this study.
6. Member, Dr. Puspodewi Dirgantari, S.Pd., M.T., M.M. for her invaluable guidance, support, and expertise throughout the research process. Her unwavering commitment and encouragement have been instrumental in shaping the direction of this study. Her expertise and guidance have greatly enriched the quality of this study.
7. I am indebted to my family, especially my wife and children, for their unwavering support, understanding, and patience throughout this journey. Their encouragement and belief in me have been a constant source of motivation.
8. I would like to express my gratitude to the management of Kumasi Technical University for granting me the study leave to pursue my doctoral degree. Their support and flexibility have been crucial in enabling me to dedicate the necessary time and resources to this research. I would also like to acknowledge my colleagues

from Ghana who are also studying at Universitas Pendidikan Indonesia. Their camaraderie, intellectual discussions, and support in various ways have been invaluable in shaping my research perspective.

9. I am deeply grateful to all the individuals who have contributed to this research project, especially the smallholder farmers in the Ejura Sekyedumase, Sekyere East, Sekyere Central, and Amansie Central districts. Their willingness to participate and respond to the questionnaire has been vital in providing the data necessary for this study. Their collaboration and insights have significantly enhanced the validity and applicability of the findings.
10. Lastly, I would like to extend my heartfelt thanks to all those who have provided assistance and support in different capacities throughout this research journey. Your contributions, whether big or small, have played a significant role in the successful completion of this PhD dissertation. Once again, I express my deepest gratitude to everyone involved. Your support and encouragement have been invaluable, and I am truly grateful for the opportunity to undertake this research.

ABSTRACT

Raymond Akantege, 2010387. **Adoption of Microfinance Digital Innovation Services in the Agriculture Sector in Ghana**, under the guidance of Prof. Dr. H. Agus Rahayu, M.P. (Promoter) Dr. Chairul Furqon S. Sos., MM (Copromoter), and Dr. Puspodewi Dirgantari, S.Pd., MT., MM. (Member).

The study examines the effects of adopting microfinance digital innovation services in the agriculture sector in Ghana. The study specifically examines financial need of household farmer, socioeconomic factors on the intention and use of microfinance digital innovation services in the agriculture sector of Ghana, examine how the intention and use of digital innovation services services mediate the relationship between the financial need of household farmer, socioeconomic factors and benefits of microfinance services. The research employs a quantitative research method and focuses on smallholder farmers from four agriculture-dominated districts in the Ashanti Region: Ejura Sekyedumase, Sekyere East, Sekyere Central, and Amansie Central. The population of the study consists of 35,807 smallholder farmers from the selected districts. A sample size of 376 smallholder farmers is selected using stratified sampling techniques to ensure fair and scientifically representative data. Data collection is conducted through a questionnaire consisting of six parts. The findings provide robust evidence supporting the hypothesized relationships between financial need of household farmer, socio-economic factors, intention of microfinance digital innovation service, use of microfinance digital innovation service, and the outcomes of micro credit benefits, micro insurance benefits, and micro savings benefits. The study reveals the significance of intention of microfinance digital innovation service as a mediator in the relationships between financial need of household farmer, socio-economic factors, and the outcomes. Additionally, the combined mediation effect of intention of microfinance digital innovation service and use of microfinance digital innovation service is found to be significant in influencing the outcomes. Based on the results, policy recommendations are proposed for various stakeholders. Policymakers should prioritize initiatives aimed at addressing the financial needs of smallholder farmers, including the design of financial assistance programs, provision of affordable credit, and targeted financial literacy programs. Financial institutions and microfinance service providers should customize their offerings to cater to the specific financial needs of smallholder farmers, while also creating user-friendly digital platforms.

ABSTRAK

Raymond Akantege, 2010387. **Adoption of Microfinance Digital Innovation Services in the Agriculture Sector in Ghana**, di bawah bimbingan Prof. Dr. H. Agus Rahayu, M.P. (Promotor), Dr. Chairul Furqon S. Sos., M.M (kopromotor), dan Dr. Puspodewi Dirgantari, S.Pd., MT., MM. (angota).

Penelitian ini mengkaji dampak dari adopsi layanan inovasi digital keuangan mikro dalam sektor pertanian di Ghana. Penelitian ini secara khusus mengkaji kebutuhan keuangan petani rumah tangga, faktor-faktor sosial ekonomi dalam niat dan penggunaan layanan inovasi digital keuangan mikro dalam sektor pertanian di Ghana, menguji bagaimana niat dan penggunaan layanan digital keuangan mikro memediasi hubungan antara kebutuhan keuangan petani rumah tangga, faktor-faktor sosial ekonomi, dan manfaat layanan keuangan mikro. Penelitian ini menggunakan metode penelitian kuantitatif dan berfokus pada petani kecil dari empat distrik yang didominasi oleh pertanian di Wilayah Ashanti: Ejura Sekyedumase, Sekyere East, Sekyere Central, dan Amansie Central. Populasi penelitian terdiri dari 35.807 petani kecil dari distrik-distrik yang dipilih. Ukuran sampel sebanyak 376 petani kecil dipilih menggunakan teknik stratified sampling untuk memastikan data yang adil dan mewakili secara ilmiah. Pengumpulan data dilakukan melalui kuesioner yang terdiri dari enam bagian. Temuan penelitian memberikan bukti kuat yang mendukung hubungan yang dihipotesiskan antara kebutuhan keuangan petani rumah tangga, faktor-faktor sosial ekonomi, niat untuk menggunakan layanan inovasi digital keuangan mikro, penggunaan layanan inovasi digital keuangan mikro, dan hasil manfaat kredit mikro, manfaat asuransi mikro, dan manfaat tabungan mikro. Penelitian ini mengungkapkan signifikansi niat untuk menggunakan layanan inovasi digital keuangan mikro sebagai mediator dalam hubungan antara kebutuhan keuangan petani rumah tangga, faktor-faktor sosial ekonomi, dan hasil manfaat. Selain itu, efek mediasi gabungan dari niat untuk menggunakan layanan inovasi digital keuangan mikro dan penggunaan layanan inovasi digital keuangan mikro ditemukan signifikan dalam memengaruhi hasil. Berdasarkan hasil ini, rekomendasi kebijakan diajukan untuk berbagai pemangku kepentingan. Pembuat kebijakan harus memberikan prioritas pada inisiatif yang ditujukan untuk mengatasi kebutuhan keuangan petani kecil, termasuk desain program bantuan keuangan, penyediaan kredit yang terjangkau, dan program literasi keuangan yang ditargetkan. Institusi keuangan dan penyedia layanan keuangan mikro harus menyesuaikan penawaran mereka untuk memenuhi kebutuhan keuangan khusus petani kecil, sambil juga menciptakan platform digital yang mudah digunakan.

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LIST OF ACRONYMS

AI	Artificial Intelligence
APR	Annual Percentage Rate
ATMs	Automated Teller Machines
BRICS	Brazil, Russia, India, China, and South Africa
CBOs	Community-Based Organizations
CFA	Confirmatory Factor Analysis
CFI	Comparative Fit Index
CSR	Corporate Social Responsibility
ESG	Environmental, Social, and Governance
FDCs	Financial Deepening Channels
FMC	Financial Management Capacity
FSIs	Financial Services Institutions
FSPs	Financial Service Providers
GDP	Gross Domestic Product
HDI	Human Development Index
ICT	Information and Communication Technology
IoT	Internet of Things
MDI	Microfinance Digital Innovation
MFIs	Microfinance Institutions
MNCs	Multinational Corporations
NGOs	Non-Governmental Organizations
OECD	Organisation for Economic Co-operation and Development
OLS	Ordinary Least Squares
PPP	Public-Private Partnership
RMSEA	Root Mean Square Error of Approximation
ROA	Return on Assets
ROE	Return on Equity

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SDGs	Sustainable Development Goals
SEM	Structural Equation Modeling
SMEs	Small and Medium-sized Enterprises
SWOT	Strengths, Weaknesses, Opportunities, Threats

LIST OF APPENDICES

Appendix I Questionnaire

Appendix II Curriculum Vitae

Appendix III Letter of Request of Data Collection

Appendix III RE: Letter of Request of Data Collection

Appendix 5 Raw Data

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