氏　　名	**ELIZA CATELO AQUINO**
学位（専攻分野の名称）	博　士（国際バイオビジネス学）
学 位 記 番 号	甲　第 861 号
学位授与の日付	令和 4 年 3 月 20 日
学 位 論 文 題 目	**Interpreting the Attitude and Behavior of Farmers: A Case of Organic Agriculture Adoption and Information Sharing in Laguna, Philippines**
論 文 審 査 委 員	主査　教　　授・博士（工学）　畑 中 勝 守
	教　　授・博士（農学）　宮 浦 理 恵
	准 教 授・博士（国際バイオビジネス学）　下 口 ニ ナ
	准 教 授・修士（教育学）　鈴 木 聡 志

論 文 内 容 の 要 旨

The unsustainable habit around the globe is being transformed through organic agriculture (OA) by inspiring both producers and consumers. In the Philippines, the adoption rate of OA is still low despite the efforts of the government and the enactment of the Republic Act No. 10068 or the Philippine Organic Agriculture Act in 2010.

Past literature discussed and focused only on the economic side such as productivity, and profitability of OA. However, some farmers were adopting and continuing to disseminate OA technology even it is not economically beneficial to them. This cannot be explained through economic or profitability analysis hence, behavioral analysis is an important tool to understand farmers who were still adopting OA even with its low profit. The findings of this study will contribute to increase adoption rate of OA as it will show some other factors that needs to be considered in a sustainable OA information sharing and adoption.

Therefore, this study's main objective is to properly interpret farmers in terms of their attitude and behavior towards OA adoption and its effect in information sharing in the Philippines. Specifically, to: 1) Identify and classify farmers based on their extrinsic and intrinsic characteristics; 2) Explore and distinguish contents, methods, and sources of information sharing of farmers; 3) Assess the impact of information sharing to farmers and other actors in the community; and 4) Assess the effect of farmers' attitude and behavior to the information they are sharing.

As a qualitative research, primary data source using semi-structured interviews and observations were utilized to gain a good access of people's perceptions, meanings, and definition of situations to understand and record what is happening on the ground. In

addition, the study applied Life History Approach (LHA), Trajectory Equifinality Approach (TEA), and Grounded Theory Approach (GTA). Furthermore, data triangulation for validity which required constant and in-depth interviews, observations, and memoing with different actors and information sources in the community accessed over different period (days, months, years) was done. There were 30 farmer-participants, 11 institution staffs (from 5 major institutions), 6 farmer family members as main actors on this study. Each of them was qualified on the criteria set by the research and was invited as a research participant following the Historically Structured Inviting (HSI) as a component of TEA. Data gathered were constantly transcribed, coded, compared, categorized, and analyzed until data saturation. In addition, respondent verification was done. Information from books, journals, training modules, websites, and other printed materials were also crossed referenced.

Based on the extrinsic categorization, age, marital status, and number of household member found to be factors in information sharing and adoption of technology as most of the farmers keep sharing what they learned to their spouse and children. Older farmers tend to utilize old practices while younger farmers were risk-takers to try new technologies. Farmer-participants also work harder to provide the needs of their family especially safe food. Most of the farmers learned agriculture from their parents and assisted their farm activities since childhood. Other farmers gained farming experience and knowledge in farming through observing others and attendance to training. Contrary to the expected situation, 40% (12) of the farmer-participants were not able to attend even one training. This can be due to external environment of the farmers as 12 farmers were living in a mountainous area (with no vehicle access), 19 farmers were living in an area with poor or unstable cellular signal, and 9 farmers were living in an area where there is no electricity.

Even with this situation, through their life history or intrinsic characteristics' categorization, results show that farmers tend to adopt and share OA because of their passion to provide healthy and safe food for their family and costumers while also protecting the environment. With this, farmer-participants were able to have a good relationship with everyone. Hence, both extrinsic and intrinsic characteristics of farmers affect OA adoption and information sharing.

There were varied information and innovation sources in the study area, each has diverse target beneficiaries, contents, focused, and methods or way of dissemination. However, most farmers were not receiving information from public and private

institutions, and they only rely on their family members or neighboring farmers. Factors affected actors' attitude in learning and adopting technology includes farmers' needs, technology's importance, sustainability, availability, easiness to adopt and pressure from others. Degree on economic, well-being, and environmental impacts varied with most valued impact on well-being and environmental. As some farmers were not receiving information to public and private sources, personal information sources have the strongest interaction and impact.

To interpret farmers attitude and behavior, TEA can be used to categorized farmers based on their life histories. Upon interpretation, it can be concluded that farmers' decisions were affected by their perception, situation, attitude, interests, and valued benefits such as finding solution to problems and helping other people. Farmers adopt OA mainly for its environmental and well-being benefits. Farmers appreciate more the well-being benefits, specifically the health benefits, good relationship with everyone, the peace of mind, and self-satisfaction they were getting in practicing OA. Therefore, the result of this study in understanding the well-being benefits including the farmers' philosophy and passion will help attain sustainable OA as information providers will focus more on imparting and realization of the importance of OA and soon farmers will also transfer it to others especially to the next generation.

This study recommends that information should be available, accessible, and can complement to the needs and interests of farmers. To achieve this, cooperation between stakeholders (public and private sources) is highly necessary. In addition, technology provider should understand the needs of the farmers to provide a sustainable and easy to adopt innovation through listening to the farmers voices and ideas. Personal sources including farmer-leader should be well knowledgeable about the technology as they have the strongest interaction and impact. This can be done by making sure that the farmer-leaders are included in all information system such as in the planning, creation, implementation, monitoring, and evaluation of technology dissemination initiatives. Farmers' morals should be shared with their family member and community, especially their children to be successor in the next generation, through acknowledgement in the society as an important and respected role or position. Furthermore, throughout interviews with farmers, the land policy for OA is not effectively regulated for OA. Policy makers should also be aware on this problem and threat of land conversion to safe and sustainable food production.

For future studies, it is recommended to explore more on the different factors

affecting farmers attitude and behavior in adopting and sharing technology through testing and evaluation in different areas (regions or countries) and with bigger sample size or population to also utilized quantitative analysis.

審 査 報 告 概 要

本研究は, フィリピン共和国ラグーナ州を対象に小規模有機農家に対する聞き取り調査を実施し, 心理学や社会学の手法を応用することで, 低収益であっても慣行農業ではなくあえて有機農業を選択する要因や, フィリピンにおける有機農業の持続性に関わる要因を解明した。現地調査より集積した個々の有機農家の個人史を時系列に整理して農家を分類し, 分類したそれぞれのカテゴリに対して記述的社会調査手法を応用して有機農業の情報源に関わる情報と経路を定性的に分析した。その結果, 特に個人との結びつきが強い情報源（家族, 近隣農家や地域農業組織体）から, 有機農業に関わる技術情報の共有・伝承が行われ, 更に有機農業の本質的な価値としての心理的幸福度の共有が行われていることを明らかにした。また, あわせて健康, モラル, 環境保全が有機農業を継続的に選択する要因であると結論づけた。本研究は, 経済・経営指標では説明できない要因を心理学手法で解明するという研究手法としての新規性を有しており, さらに有機農業の持続性要因に心理的幸福度が存在することを明らかにしたという二つの新規性を有している。以上より, 研究成果等の重要性を評価した結果, 審査委員一同は博士(国際バイオビジネス学)の学位を授与する価値があると判断した。