รายงานผลการประชุมวิชาการนานาชาติและการนำเสนอผลงานวิจัย
The 15th Hatyai International Conference (รูปแบบ Online)
ตามระเบียบมหาวิทยาลัยสุโขทัยธรรมาธิราช ว่าด้วยการให้ทุนฝึกอบรม ดูงาน
และประชุมทางวิชาการแก่บุคลากรของมหาวิทยาลัย

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2. รายละเอียดเกี่ยวกับการไปประชุมประชุมวิชาการนานาชาติ

2.1 <u>รายงานการประชุมวิชาการนานาชาติ</u>

(1) หัวข้อเรื่อง และวัตถุประสงค์ของการประชุม/สัมมนา

การประชุมวิชาการนานาชาติ The 15th Hatyai International Conference (รูปแบบ Online) ในการประชุมวิชาการนานาชาติครั้งนี้มีวัตถุประสงค์ในการนำเสนอผลงานวิจัยในระดับนานาชาติ แลกเปลี่ยนเรียนรู้จากงานวิจัยและสร้างเครือข่ายวิชาการในระดับนานาชาติ

(2) ผู้เข้าร่วมประชุม/สัมมนา

ผู้เข้าร่วมประชุมประกอบไปด้วยอาจารย์ นักวิชาการ นักวิจัยจากประเทศต่างๆ ทั่วโลก 10 ประเทศ จำนวน 125 คน และนักศึกษาจากมหาวิทยาลัยหาดใหญ่ จำนวน 80 คน

(3) วิธีการประชุม/สัมมนา

สถาบันอุดมศึกษาเป็นแหล่งเรียนรู้ที่สำคัญของประเทศ นอกจากมีหน้าที่ในการผลิตบัณฑิต สู่ตลาดแรงงานของประเทศแล้ว ยังมีหน้าที่พัฒนาและรวบรวมองค์ความรู้ที่ทันสมัย ถ่ายทอดสู่สังคม โดยเฉพาะการผลิตผลงานวิจัยที่มีคุณภาพ เพื่อการใช้ประโยชน์และความก้าวหน้าทางวิชาการภายใต้จุดเน้นของนโยบายแผนพัฒนาเศรษฐกิจและสังคมแห่งชาติ แผนกลยุทธ์การพัฒนาบุคลากรวิจัยและนวัตกรรม และแผนพัฒนามหาวิทยาลัย ดังนั้น มหาวิทยาลัยจึงมีการบริหารจัดการเพื่อส่งเสริมและสนับสนุนคณาจารย์ นักวิจัย และบุคลากรให้มีสมรรถนะในการทำวิจัย ตลอดจนส่งเสริมและสร้างเครือข่ายการทำวิจัยกับหน่วยงานภายนอก เพื่อให้ได้ผลงานวิจัยและงานสร้างสรรค์ที่มีคุณภาพ สามารถตอบสนองความต้องการของชุมชน สังคม และก่อให้เกิดประโยชน์แก่สาธารณชนได้ในวงกว้าง

มหาวิทยาลัยหาดใหญ่ เป็นหนึ่งในสถาบันการศึกษาระดับอุดมศึกษาเอกชน มีพันธกิจเพื่อพัฒนาทรัพยากรมนุษย์ สร้างสรรค์สังคม ให้ทันต่อการเปลี่ยนแปลงของประเทศและสังคมโลก ตามพันธกิจอุดมศึกษาด้วยการบริหารจัดการสมัยใหม่ โดยตระหนักถึงความสำคัญและการพัฒนาบุคลากรในการผลิตผลงานวิจัยอย่างต่อเนื่อง เพื่อสร้างองค์ความรู้อันจะนำไปสู่การพัฒนาและสร้างสรรค์สังคม ตลอดจนการจัดการเรียนการสอน การให้บริการทางวิชาการ เพื่อเป็นฐานความรู้แก่ชุมชนและสังคมในการพัฒนาประเทศให้ก้าวทันต่อการเปลี่ยนแปลงของสังคมโลก ตลอดจนดำเนินการส่งเสริมสนับสนุนการเผยแพร่ผลงานวิจัยที่ดำเนินการแล้วเสร็จให้ได้มี

โอกาสเผยแพร่ในแวดวงวิชาการและขยายองค์ความรู้สู่การนำไปใช้ประโยชน์ให้กว้างขวางขึ้น มหาวิทยาลัยหาดใหญ่ จึงกำหนดจัดการประชุมหาดใหญ่วิชาการระดับชาติและนานาชาติ ครั้งที่ 15 ขึ้น ในวันศุกร์ที่ 17 พฤษภาคม 2567 เพื่อเผยแพร่ผลงานวิจัย และแลกเปลี่ยนองค์ความรู้ร่วมกันระหว่างนักวิจัย นักวิชาการ อาจารย์ นิสิต นักศึกษา และผู้สนใจทั่วไป เพื่อนำไปสู่การพัฒนาความก้าวหน้าทางวิชาการต่อไป

(4) เข้าประชุม/สัมมนาในฐานะวิทยากรบรรยาย (เดี่ยว/กลุ่ม) หรือผู้อภิปรายกลุ่ม หรือเป็นผู้เสนอบทความทางวิชาการในที่ประชุม/สัมมนา (ในกรณีดังกล่าวโปรดจัดทำบทสรุปย่อในส่วนของท่านด้วย)

การเข้าร่วมประชุมครั้งนี้กระผมได้เข้าร่วมประชุมในฐานะผู้นำเสนอบทความวิจัย 2 เรื่องในหัวข้อเรื่อง

Factors Affecting the Business Operational Income of Agricultural Cooperatives in Kalasin Province, Thailand และ

The Measurement of Technical and Cost Efficiency of Savings Cooperatives of Loei Province, Thailand Based on the Malmquist Data Envelopment Analysis

(5) กรณีเข้าร่วมประชุม/สัมมนา ควรประมวลชื่อบทความทางวิชาการและเอกสารประกอบการประชุม/สัมมนา ที่เห็นว่าน่าจะเผยแพร่ให้ผู้อื่นได้ทราบ

เรื่องที่ 1 Factors Affecting the Business Operational Income of Agricultural Cooperatives in Kalasin Province, Thailand มีสาระสำคัญสรุปได้ดังนี้ The research objective was to examine the factors affecting the business operational income of Agricultural Cooperatives in Kalasin province, Thailand. The secondary data were collected from the Cooperative Auditing Department database from 2010 to 2023 of 44 Agricultural Cooperatives. The total numbers accounted for 572 observations. The data were analyzed by econometric methodology to examine the factors affecting the business operational income of Agricultural Cooperatives in Kalasin Province, Thailand. Multiple linear regression analysis with the remove technique. The findings were factors that had a positive influence on business operational income which comprised of 4 factors, cash and bank deposits, net short-term receivables, net long-term receivables, and total funds of the cooperative. On the other hand, factors that had a negative influence on business operational income comprised of 8 factors, inventories, other current assets, long-term investment, other non-current assets, trade accounts payable, other cooperative deposits, long-term loan, and share capital. Agricultural Cooperatives in Kalasin province would take their consideration all 4 factors that would lead to an increase in their business operational income. Since business operational income expressed a financial status.

เรื่องที่ 2 The Art of the Occult and Hermeneutics According to Philosophy of Paradigm มีสาระสำคัญสรุปได้ดังนี้ The objective of the research was to hermeneutics the art of the occult according to the philosophy of paradigm. The method of studying philosophy was qualitative research by collective main data from documents data for lead all information to Gadamer's philosophical hermeneutics with fusion horizon by the reader. The result was shown that the art of the occult could be interpreted into 5 paradigms that are; 1) primitive paradigm, the art of occult is the tool to communicate to the On-High and ask for the kindness for the benefit of themselves, 2) ancient paradigm, the art of the occult is the instrument with precise laws that if follows accurately thus get the require outcome, 3) medieval paradigm, the art of the occult is the strange thing out of the religious domains, it is the wrong pathway, mystics and wrong way that not lead us to the good afterlife, 4) modern paradigm, the art of the occult is the fool of the people which persuaded by the occults, it is the obstacle to the progression of the world, and 5) postmodern paradigm, the art of the occult is the curiosity, strangeness but if utilized thus got the outcome, it is good. The result could be the perspective of the people to the art of the occult and we could guide the correct understanding to the art of the occults.

เรื่องที่ 3 Knowledge, Attitude, and Practice (KAP) of Emergency Nurses in Caring for Older Patients: A Case Study of Health Regions 11 and 12 มีสาระสำคัญสรุปได้ดังนี้ This descriptive study aimed to explore the level of knowledge, attitude, and emergency nurses' practice in caring for older patients. Two-hundred and sixty-eight emergency department (ED) nurses were conveniently recruited from 3 tertiary care hospitals and 6 secondary care hospitals in health regions 11 and 12. The response rate of questionnaires was 76.49%. Data were collected by using questionnaires, including demographic data, Knowledge of Geriatric Emergency Care (KGEC), Attitude of Older Patient Questionnaire (AOPQ), and Practice for Geriatric Emergency Care (PGEC). The content validity index values of the KGEC, AOPQ, and PGEC were 0.96, 0.92, and 0.99, respectively. The internal consistency reliability of KGEC using K-R 20 was 0.70, and the Cronbach's alpha coefficient values of AOPQ and PGEC were 0.81 and 0.94, respectively. The data were analyzed by using descriptive statistics. The findings of this study revealed that 46.30 % of participants reported their knowledge of geriatric emergency care at a moderate level, followed by a high level (27.32 %). The highest percent of participants reported a neutral attitude towards caring for older patients, accounting for 89.27 %, followed by a positive attitude, accounting for 10.24 %, while the practice for geriatric emergency care showed at a moderate level, accounting for 32.19 %, followed by a high level, accounting for 29.76 %. The study findings suggest that ED nurses should be better trained to advance their knowledge and motivate

positive attitudes towards older patients. This could help ED nurses improve their geriatric emergency care practice.

เรื่องที่ 4 Capital that Influences the Decision to Pursue an Agricultural Career: A Case Study of Young Farmers in The Northeastern Region of Thailand มีสาระสำคัญสรุปได้ดังนี้ This research aims to study the capital that influences the decision to pursue a career in agriculture among the new generation in the northeastern region of Thailand using quantitative research methods and used an interview form with a Cronbach's Alpha value of 0.90 to collect data from a sample of 310 people who were randomly selected (Simple random sampling) with an acceptable error level of 0.05. The research results are divided into 3 main issues: 1) Basic information of new generations farmer (Individual, Household, Economic) 2) Capital level influenced and 3) Relationship between basic information of new generations farmer and capital. The research found that the new generation is a group of people in Generation Y. The average age is 38 years. They have the status of being the children of farmers and 1 in 4 experiences working in other occupations before coming to agriculture. Entered the agricultural profession at the average age of 29 years. Most were households with debt and most had other occupations as well. Ownership of almost all land comes from traditional inheritance. Currently, households can make an average profit of 377,261 baht per year from farms and an average of 512,039 baht per year from other occupations. Human capital (mean = 3.8) and physical capital and natural capital (mean = 3.6) are important at the level. While social capital (mean = 3.1) and monetary capital (mean = 2.5) were of moderate importance. In terms of the relationship between the general information of the new generation and capital, it is found that personal basic factors with a statistically significant relationship at the 0.05 level, including the number of years of formal education. The basic household factors that have a statistically significant relationship at the 0.01 level include debt of farmer households and possession of high-value machinery. The basic economic factors of households that have a statistically significant relationship at the 0.05 level are the economic level of the province areas for livestock and selling products to middlemen.

เรื่องที่ 5 The Undesirable Effect of Facebook Addiction on Vietnamese Youth มีสาระสำคัญสรุปได้ดังนี้ This study investigates the complex dynamics of Facebook usage among Vietnamese youth and examines its negative effects on their well-being and social behaviors. Given the growing reliance on platforms like Facebook among Vietnam's youth, the research aims to highlight the adverse consequences of such extensive engagement. Using quantitative methods, a survey was conducted with 261 Vietnamese citizens aged 13 to 25, consisting of 24 questions covering demographics and Facebook usage frequency. Responses were measured on a five-point Likert scale,

and data analysis was performed using SPSS software, including Multiple Regression Analysis. The results indicate a significant negative impact of social media addiction on self-esteem (H1 accepted), suggesting that Facebook addiction lowers the self-esteem of Vietnamese youth. Although H2 was not supported, the positive coefficient suggests a statistical significance, indicating that Facebook addiction does not diminish self-presentation on social media. Instead, it correlates with increased self-presentation, including false representation. Moreover, social media addiction positively influences self-harm intention (H3 accepted), indicating a heightened risk of physical and psychological self-harm among Vietnamese youth. These findings underscore the importance of addressing the negative effects of Facebook on the psychological and social well-being of Vietnam's younger generation. Interventions aimed at mitigating Facebook addiction and its consequences are crucial for creating a healthier online environment for Vietnamese youth. This research contributes valuable insights to understanding the nuanced impacts of social media, particularly Facebook, on Vietnam's youth.

เรื่องที่ 6 The Measurement of Technical and Cost Efficiency of Savings Cooperatives of Loei Provinces, Thailand Based on the Malmquist Data Envelopment Analysis มีสาระสำคัญสรุปได้ดังนี้ technical efficiency of Savings Cooperatives, and 2) to measure the cost efficiency of Savings Cooperatives in Loei Province, Thailand by the Malmquist Data Envelopment Analysis. The secondary data were collected from the Cooperative Auditing Department database from 2018 to 2022 comprised of 8 savings cooperatives with 5 years. The total numbers were accounted for 40 observations. The data were analyzed by Malmquist Data Envelopment Findings showed that 1) there were 6 savings cooperatives in Loei Province had a technological efficiency index greater than 1. This indicated an improvement in technological efficiency for these 6 savings cooperatives in Loei Province, and 2) savings cooperatives in Loei Province were currently under consideration. They had an average technical efficiency of 43%, an average cost efficiency of 32%, and an overall average efficiency of 52%. Savings cooperatives in Loei Province were currently overusing input factors, they also lack efficiency in managing and organizing these factors to achieve an appropriate balance. Thus, there was a need for these cooperatives to improve their management practices to achieve a more balanced and efficient use of resources at the same level.

(6) การนำเสนอบทความวิจัยของ รองศาสตราจารย์ ดร. อนุชา ภูรพันธุ์ภิญโญ

The Measurement of Technical and Cost Efficiency of Savings Cooperatives of Loei Province, Thailand Based on the Malmquist Data Envelopment Analysis

Anucha Wittayakorn-Puripunpinyoo[1*]

[1] Associate Professor, School of Agriculture and Cooperatives, Sukhothai Thammathirat Open University
*Corresponding author, E-mail: puanucha@windowslive.com

Abstract

The research objectives were: 1) to measure the technical efficiency of Savings Cooperatives, and 2) to measure the cost efficiency of Savings Cooperatives in Loei province, Thailand by the Malmquist Data Envelopment Analysis. The secondary data were collected from the Cooperative Auditing Department database from 2018 to 2022 comprised of 8 savings cooperatives with 5 years. The total numbers were accounted for 40 observations. The data were analyzed by Malmquist Data Envelopment Findings showed that 1) there were 6 savings cooperatives in Loei province had a technological efficiency index greater than 1. This indicated an improvement in technological efficiency for these 6 savings cooperatives in Loei province, and 2) savings cooperatives in Loei province were currently under consideration. They had an average technical efficiency of 43%, an average cost efficiency of 32%, and an overall average efficiency of 52%. Savings cooperatives in Loei province were currently overusing input factors, they also lack efficiency in managing and organizing these factors to achieve an appropriate balance. Thus, there was a need for these cooperatives to improve their management practices to achieve a more balanced and efficient use of resources at the same level.

Keyword: Technical Efficiency, Cost Efficiency, Savings Cooperatives, Data Envelopment Analysis

Introduction

Savings cooperatives, also known as savings and credit cooperatives, function as member-owned financial institutions with a pivotal role in advancing financial inclusion and community development. This research essay investigates the organizational structure, advantages, and impact of savings cooperatives on individual members and local communities. Typically formed by individuals who share a common bond, these cooperatives involve the collective pooling of members' savings to provide financial services within the community. This cooperative setup ensures democratic governance, granting each member an equal voice in decision-making processes (Mitchell, 2019). The combined savings of members serve as a funding reservoir for extending affordable loans and diverse financial products to fellow members.

In Thailand, the savings cooperatives known as the formation of organization aims to provide mutual support among its members. Members consistently deposit their earnings into the cooperative, contributing through shareholding and regular savings. Moreover, in instances of financial distress, the cooperative offers assistance by providing loans at interest rates lower than those of conventional financial institutions. All members of the cooperative are part of the same entity and receive a steady monthly income (The Federation of Savings and Credit Cooperative of Thailand Limited, 2023).

According to the Federation of Savings and Credit Cooperative of Thailand Limited. (2023), Savings cooperatives have legal entity status according to cooperative laws, and the Ministry of Finance has declared that savings cooperatives can calculate interest on loans, similar to financial institutions, as per the Ministry of Finance announcement dated November 21, 1983.

In Overall of Thailand, the operation of the cooperative is funded through share capital and deposits from members, including both regular and savings deposits, without borrowing funds from foreign sources. Currently, there are a total of 1,227 savings cooperatives, and the total savings system (share capital and deposits). These funds are used to provide loans to members in need. The total assets of the cooperatives amount with more than 63.53 percent being allocated for member loans.

To ensure regular contributions and loan repayments, cooperatives utilize a deduction system at the payment location, ensuring a consistent cash flow every month. This operational approach contributes to the stability of the cooperative business, particularly when assessing the financial soundness of assets. The entire savings cooperative

system had a provision for doubtful debts regarding member loans and potential doubtful debts for member loans at only 0.021 percent and 0.075 percent, respectively. This percentage is significantly low compared to other types of financial institutions (Cooperative Auditing Department, 2023).

Loei is situated in the Isan region of upper northeastern Thailand and stands out as one of the less densely populated provinces in the country. It shares borders with Nong Khai, Udon Thani, Nong Bua Lamphu, Khon Kaen, Phetchabun, and Phitsanulok, while to the north, it adjoins Xaignabouli and Vientiane provinces of Laos (https://en.wikipedia.org/wiki/Loei_province).

Characterized by its mountainous terrain, Loei features a provincial capital, Loei, nestled in a fertile basin surrounded by mist-covered peaks and diverse flora. Notable mountains in the area include Phu Kradueng, Phu Luang, and Phu Ruea. The Loei River, a tributary of the Mekong, flows through the province, marking part of its northern boundary with Laos. Phu Thap Buek, the highest peak in the Phetchabun Range, is also found in Loei. Additionally, Phu Kradueng is situated within Phu Kradueng National Park. The western part of the province extends to the southern tip of the Luang Prabang Range within the Thai highlands. Forest coverage in Loei spans 3,382 km^2, accounting for 32.2 percent of the province's total area (https://en.wikipedia.org/wiki/Loei_province).

Like other provinces in Thailand, people in Loei province are coming together to establish a savings cooperative means the gathering or meeting of individuals or members with a common objective. This is done to create a conducive environment for establishing a cooperative that will provide various savings and financial services to the members within that group. The phrase "coming together" implies the pooling of resources, energy, or capabilities of the members to create strength and sustainability in establishing the savings cooperative. This process emphasizes cooperation and the mutual benefits of members in managing the cooperative being formed.

The primary objectives of savings cooperatives typically revolve around promoting financial well-being, community development, and member empowerment. While specific goals may vary, common objectives. The main objectives of savings cooperatives center on fostering financial inclusion, community development, and member-centric financial services, guided by the principles of cooperation and mutual benefit.

Table 1. Number of Members, Total Revenue and Total Expenses of Savings Cooperatives in Loei Province, Thailand

Name of Cooperatives in Loei Province	Number of Members (people)	Total Revenue ($)	Total Expenses ($)
Teachers' Savings Cooperative of Loei Province Limited	7,753	590,303.23	414,507.96
Police Savings Cooperative of Loei Province Limited	1,566	66,284.94	31,131.27
Hospital Savings Cooperative of Loei Province Limited	1,155	42,869.32	7,130.18
Savings Cooperative of Loei Province Limited	378	9,261.52	9,708.06
Military Savings Cooperative of Sri Song Rak Limited	640	10,001.31	4,862.51
Teachers' Savings Cooperative of the Department of General Education, Loei Province Limited	1,742	144,837.34	205,764.08
Public Health Savings Cooperative of Loei Province Limited	2,080	121,344.42	47,094.87
Army Department Savings Cooperative No. 21 Limited	789	2,317.04	576.24
Total	16,103	987,219.13	720,775.16

Source: Cooperative Auditing Department, 2023

According to table 1, there were 8 Savings Cooperatives in Loei province, Thailand with the total of cooperatives' members of 16,103 persons, total revenue, and total expenses of $ 987,219.13, and $ 720,775.16 respectively.

Table 2. Total Assets, Share Capital, Total Funds of the Cooperatives and Total Debt of Savings Cooperatives in Loei Province, Thailand

Name of Cooperatives in Loei Province	Total Assets ($)	Share Capital ($)	Total Funds of the Cooperatives ($)	Total Debt ($)
Teachers' Savings Cooperative of Loei Province Limited	338,589,270.73	94,971,425.71	116,482,962.81	222,106,307.92
Police Savings Cooperative of Loei Province Limited	37,439,559.15	12,316,190.57	15,705,615.64	21,733,943.50
Hospital Savings Cooperative of Loei Province Limited	28,228,999.48	15,746,083.71	18,428,744.60	9,800,254.88
Savings Cooperative of Loei Province Limited	2,936,713.00	1,358,382.86	1,727,348.34	1,209,364.67
Military Savings Cooperative of Sri Song Rak Limited	5,378,174.51	1,959,716.86	2,425,480.61	2,952,693.90
Teachers' Savings Cooperative of the Department of General Education, Loei Province Limited	62,223,294.51	22,137,796.57	8,919,705.31	71,142,999.83
Public Health Savings Cooperative of Loei Province Limited	72,412,006.50	32,032,112.86	37,533,659.99	34,878,346.50
Army Department Savings Cooperative No. 21 Limited	1,454,302.33	1,123,754.29	1,227,270.79	227,031.55
Total	548,662,320.21	181,645,463.43	202,450,788.09	364,050,942.74

Source: Cooperative Auditing Department, 2023

According to table 2, there were 8 Savings Cooperatives in Loei province, Thailand with total assets, share capital, total funds of the cooperatives of $548,662,320.21, $181,645,463.43, $202,450,788.09, and $364,050,942.74 respectively.

From past to present, based on the information provided, it seems that there are numerous research studies related to savings cooperatives in the Loei province, focusing on financial status and operational aspects. However, there appears to be no prior research specifically addressing the "Technical and Cost Efficiency of Savings Cooperatives of Loei Provinces, Thailand Based on the Malmquist Data Envelopment Analysis."

Considering conducting such research, it could potentially contribute valuable insights into the technical and cost efficiency of savings cooperatives in Loei province using the Malmquist Data Envelopment Analysis method. This approach assesses changes in productivity over time and could shed light on the effectiveness of these cooperatives in terms of technical efficiency and cost management.

Literature Review

1. Savings cooperatives

Savings cooperatives, also known as savings and credit cooperatives, are member-owned financial institutions that play a pivotal role in promoting financial inclusion and community development. This research essay explores the structure, benefits, and impact of savings cooperatives on both individual members and local communities.

Savings cooperatives are typically formed by individuals with a shared bond, pooling their savings to provide financial services within the community. This cooperative structure ensures democratic governance, where each member has an equal say in decision-making processes (Mitchell, 2019). Members' pooled savings become a source of funds for providing affordable loans and other financial products to fellow members.

Benefits of Savings Cooperatives consisted of 1) Financial Inclusion: Savings cooperatives act as a bridge to financial services for individuals who might face barriers to access in traditional banking systems (Johnson et al., 2020). 2) Low-Cost Financial Services: Cooperative members often enjoy more favorable terms on loans and higher interest rates on savings compared to commercial banks (Smith & Brown, 2018). 3) Community Development: Profits generated by savings cooperatives are often reinvested in local communities, supporting various development initiatives such as infrastructure projects, education, and healthcare (Roberts, 2017).

Research has shown that the presence of active savings cooperatives positively impacts local economies. A study conducted by Thompson et al. (2016) found that communities with well-established savings cooperatives experience increased financial stability, improved access to credit, and a boost in entrepreneurial activities. While savings cooperatives provide substantial benefits, they also face challenges, such as regulatory constraints and technological limitations (White, 2019). Addressing these challenges opens up opportunities for innovation, especially in leveraging technology to enhance financial services delivery (Johnson, 2021).

Savings cooperatives serve as crucial agents of financial inclusion and community

development. Their member-centric structure, coupled with a focus on reinvesting in the local community, makes them powerful tools for economic empowerment. While challenges exist, the potential for positive impact on individuals and communities suggests that savings cooperatives remain a viable and valuable component of the financial landscape.

2. **Savings Cooperatives in Thailand**

Savings cooperatives in Thailand have emerged as vital components of the country's financial landscape, contributing significantly to financial inclusion and community development. This research essay aims to delve into the structure, benefits, challenges, and overall impact of savings cooperatives in Thailand, shedding light on their multifaceted role.

In Thailand, savings cooperatives, often referred to as "Sahakol" or "Kasikorn," are member-owned financial institutions that operate on cooperative principles. Members, typically with a common bond like occupation or residence, pool their savings to provide accessible and affordable financial services (Sombat, 2020). The cooperative structure ensures democratic governance, with each member having an equal say in decision-making processes.

Savings cooperatives in Thailand play a pivotal role in providing financial services to individuals who might otherwise face barriers in accessing traditional banking services (Boonchai et al., 2018). These cooperatives contribute to local economic development by reinvesting profits in the community, supporting initiatives such as education, healthcare, and small-scale entrepreneurship (Supachai, 2019). While Thai savings cooperatives bring significant advantages, they also face challenges such as regulatory constraints and the need for technological advancement (Prapapan, 2021). Addressing these challenges presents opportunities for innovation, especially in leveraging digital technologies to enhance service delivery and accessibility.

Research indicates a positive impact of savings cooperatives on local communities in Thailand. A study by Kasikorn Research Center (2020) found that communities with active savings cooperatives experienced increased financial literacy, improved livelihoods, and a strengthened sense of community.

The regulatory environment significantly influences the operations of savings cooperatives in Thailand. The Bank of Thailand, through the Cooperative Promotion Department, plays a crucial role in overseeing and regulating these financial institutions

(Bank of Thailand, 2017).

Savings cooperatives in Thailand stand as key contributors to financial inclusion and community development. Their member-centric approach, combined with a commitment to reinvesting in the local community, positions them as essential players in Thailand's financial landscape. While challenges persist, particularly in regulatory compliance and technological adaptation, the overall impact of savings cooperatives on individuals and communities in Thailand underscores their importance.

3. **Technical Efficiency**

Operational efficiency is a critical aspect of organizational performance, and technical efficiency serves as a key metric in evaluating the effectiveness of production processes. This research essay aims to provide a thorough examination of technical efficiency, exploring its definition, measurement, factors influencing it, and its implications for various industries.

Technical efficiency refers to the ability of an organization or system to produce maximum output using the minimum amount of input resources (Farrell, 1957). It is a fundamental concept in production economics and management studies, focusing on optimizing the production process.

Measurement of Technical Efficiency: Various methodologies exist for measuring technical efficiency, with Data Envelopment Analysis (DEA) and Stochastic Frontier Analysis (SFA) being commonly employed (Coelli et al., 2005). DEA assesses efficiency by comparing the performance of similar units, while SFA estimates a production frontier and evaluates how close each unit comes to that frontier.

Factors Influencing Technical Efficiency: Several factors contribute to the level of technical efficiency within an organization. These include technology adoption, employee skills and training, managerial practices, and the quality of input resources (Charnes et al., 1978). External factors like market conditions and regulatory environments can also impact technical efficiency.

Implications for Industries: High levels of technical efficiency have significant implications for industries. Efficient production processes can lead to cost savings, increased competitiveness, and improved product quality. In sectors such as manufacturing and agriculture, where efficiency is directly tied to resource utilization, enhancing technical efficiency is crucial for sustainable practices (Färe et al., 1994).

Despite its importance, achieving and maintaining high levels of technical efficiency

can be challenging. Factors such as outdated technology, inadequate infrastructure, and resistance to change within organizations can impede progress (Kumbhakar & Lovell, 2000). Identifying and addressing these challenges are integral to enhancing efficiency.

Technical efficiency is a vital concept in understanding and improving operational performance. Its measurement provides insights into how effectively organizations convert inputs into outputs. Industries that prioritize and invest in enhancing technical efficiency stand to gain not only in terms of cost-effectiveness but also in terms of competitiveness and sustainability.

4. **Data Envelopment Analysis (DEA)**

Data Envelopment Analysis (DEA) is a powerful mathematical technique employed in operations research and management science to assess and compare the relative efficiency of decision-making units (DMUs) within a set. This research essay explores the fundamentals of DEA, its application, and its significance in evaluating efficiency across various sectors.

DEA, developed by Charnes, Cooper, and Rhodes in the late 1970s, is a non-parametric method that evaluates the relative efficiency of DMUs based on multiple inputs and outputs (Chames et al., 1978). Unlike parametric methods, DEA does not require specific functional forms or assumptions about the underlying production process.

The basic DEA model assesses each DMU's efficiency by comparing its output to input ratios with those of other units. The model identifies a benchmark, called the efficient frontier, representing the most efficient units. Units lying on the frontier are considered fully efficient, while those inside are deemed less efficient and potentially have room for improvement (Coelli et al., 2005).

DEA is versatile and can be applied to various contexts, including manufacturing, service industries, and public services. Inputs and outputs are defined based on the specific goals of the analysis. For instance, in a manufacturing setting, inputs might include labor and raw materials, while outputs could be the quantity and quality of produced goods.

DEA has seen several extensions and variations, accommodating different perspectives and complexities. These include models for handling multiple stages of production, incorporating environmental variables, and addressing undesirable outputs. Radial and non-radial models offer flexibility in assessing pure technical efficiency and scale efficiency separately.

DEA has found applications in diverse fields, such as banking, healthcare, education,

and agriculture. In the banking sector, DEA helps assess the efficiency of branches or financial institutions, considering inputs like capital and labor and outputs like loans and deposits. In healthcare, it aids in evaluating hospital performance based on inputs such as beds, staff, and outputs like patient services.

While DEA is a valuable tool, its application is not without challenges. Sensitivity to outliers, the choice of inputs and outputs, and the potential for bias in small sample sizes are considerations that researchers and practitioners must navigate (Coelli et al., 2005).

Data Envelopment Analysis stands as a robust methodology for evaluating and improving operational efficiency across various industries. Its non-parametric nature and flexibility make it a preferred choice for assessing relative performance, providing insights for organizational enhancement and resource optimization.

5. **Cost Efficiency**

Cost efficiency is a paramount consideration for organizations seeking to optimize resource allocation and enhance competitiveness. This research essay aims to delve into the intricacies of cost efficiency, exploring its conceptualization, measurement methodologies, influential factors, and implications for diverse industries.

Cost efficiency refers to the ability of an organization to achieve its objectives or deliver its products and services at the lowest possible cost. It involves optimizing the utilization of resources to minimize expenses while maintaining or improving the quality and effectiveness of operations (Freeman & Cunha, 2004).

Measurement of Cost Efficiency: Measuring cost efficiency involves assessing the relationship between inputs and outputs in production processes. Various methodologies exist, including the Cost Efficiency Index, which compares actual costs to the best achievable costs, and the Data Envelopment Analysis (DEA), which evaluates relative efficiency among decision-making units (Coelli et al., 2005; Farell, 1957).

Several factors contribute to the level of cost efficiency within an organization. Technological advancements, economies of scale, skilled workforce, and effective supply chain management are recognized as influential determinants (Diewert, 1992). External factors, such as market competition and regulatory environments, also impact cost efficiency.

High levels of cost efficiency translate into improved competitiveness, increased profitability, and better financial sustainability for industries. Sectors like manufacturing, where production costs significantly impact profit margins, and service industries, where

operational costs affect service pricing, are particularly sensitive to cost efficiency considerations (Banker & Natarajan, 2008).

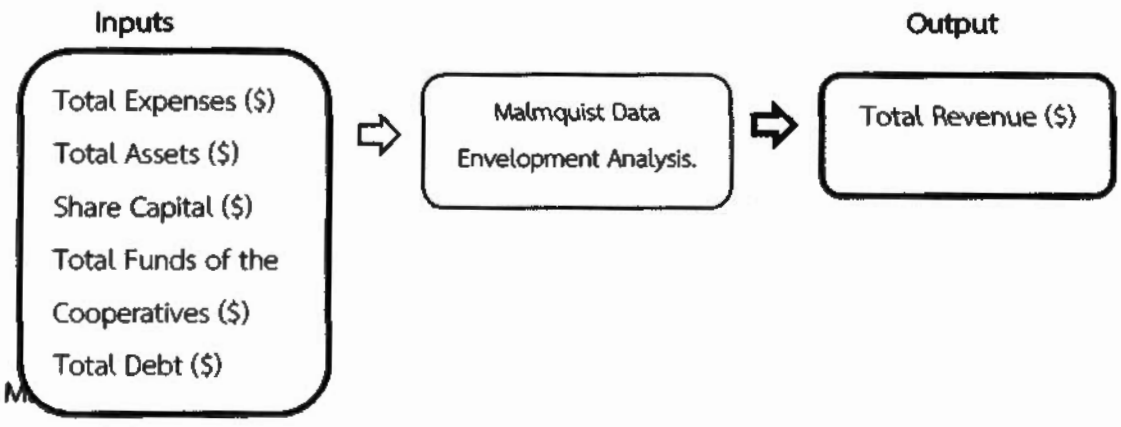
Cost efficiency assessment methodologies vary based on industry characteristics and objectives. Activity-Based Costing (ABC), Total Cost Assessment (TCA), and Benchmarking are common tools used to identify and analyze cost drivers, allowing organizations to streamline processes and minimize unnecessary expenditures (Cooper & Kaplan, 1992).

While achieving cost efficiency is a strategic goal, organizations often face challenges in implementation. Resistance to change, inadequate technology adoption, and market uncertainties are common impediments. Balancing cost-cutting measures with the need for innovation and quality improvement poses a delicate challenge (Dess & Beard, 1984). Cost efficiency remains a critical aspect of organizational success. Its measurement and enhancement contribute not only to financial sustainability but also to the overall competitiveness and adaptability of organizations in dynamic business environments.

Objectives

The research objectives were: 1) to measure the technical efficiency of Savings Cooperatives in Loei province, Thailand and 2) to measure the cost efficiency of Savings Cooperatives in Loei province, Thailand by the Malmquist Data Envelopment Analysis.

Concept theory framework



Methodology

The methodology was quantitative research applying the Malmquist Data Envelopment Analysis to measure the technical efficiency of Savings Cooperatives in Loei province, Thailand and the cost efficiency of Savings Cooperatives in Loei province, Thailand by the Malmquist Data Envelopment Analysis. The presentation of the research methodology

study and its details unfolded in the following manner:

1. Data Collection

The secondary data were collected from the Cooperative Auditing Department database from 2018 to 2022 comprised of 8 savings cooperatives in Loei province which comprised of 1) total expenses, 2) total assets, 3) share capital, 4) total funds of the cooperatives, 5) total debt, and 6) total revenue. With 5 years and 8 savings cooperatives, the total numbers were accounted for 40 observations.

2. Data Analysis

The data were analyzed by Malmquist Data Envelopment Analysis to measure the technical efficiency of Savings Cooperatives in Loei province, Thailand and the cost efficiency of Savings Cooperatives in Loei province, Thailand. The inputs were total expenses, total assets, share capital, total funds of the cooperatives, and total debt. The output was total revenue shown in the concept theory framework.

Results

Following the research objectives, the measurement of technical and cost efficiency of savings cooperatives of Loei Provinces, Thailand Based on the Malmquist Data Envelopment will be expressed as follows:

Part 1. The technical efficiency of savings cooperatives of Loei Provinces, Thailand would be expressed in table3.

Table 3. The Technical Efficiency of Savings Cooperatives in Loei Province, Thailand

Savings Cooperatives Name	effch	techch	pech	sech	tfpch
Teachers' Savings Cooperative of Loei Province Limited	1.080	1.824	1.000	1.080	1.971
Police Savings Cooperative of Loei Province Limited	1.395	1.989	1.392	1.002	2.774
Hospital Savings Cooperative of Loei Province Limited	1.511	2.597	1.488	1.015	3.925
Savings Cooperative of Loei Province Limited	1.000	1.909	1.000	1.000	1.909
Military Savings Cooperative of Sri Song Rak Limited	3.450	1.979	3.330	1.036	6.828

Teachers' Savings Cooperative of the Department of General Education, Loei Province Limited	1.000	1.834	1.000	1.000	1.834
Public Health Savings Cooperative of Loei Province Limited	4.288	2.161	4.281	1.002	9.269
Army Department Savings Cooperative No. 21 Limited	1.400	2.232	1.000	1.400	3.125
Mean	1.619	2.053	1.527	1.06	3.323

Source: Calculation

Noted:

Effch = The Change of Technical Efficiency under the condition of Constant Return to Scale (CRS)

techch = The Change of Technology

pech = The Change of Technical Efficiency under the condition of Varible Return to Scale (VRS)

sech = The Change of Scale Efficiency

tfpch = The Change of Total Factor Productivity (TFP)

According to table3, the analysis of changes in efficiency and technology using the Malmquist DEA method reveals that 6 savings cooperatives in Loei province had a technological efficiency index greater than 1. These cooperatives included the Teachers' Savings Cooperative of Loei Province Limited, the Police Savings Cooperative of Loei Province Limited, the Hospital Savings Cooperative of Loei Province Limited, the Military Savings Cooperative of Sri Song Rak Limited, the Public Health Savings Cooperative of Loei Province Limited, and the Army Department Savings Cooperative No. 2 1 Limited. This indicated an improvement in technological efficiency for these 6 savings cooperatives in Loei province.

The analysis indicates that 2 savings cooperatives in Loei province have a technological efficiency index equaled to 1, signifying no change in technological efficiency. These cooperatives were the Savings Cooperative of Loei Province Limited and the Teachers' Savings Cooperative of Loei Province Limited. This suggested that these two savings cooperatives had maintained a constant level of technological efficiency without improvement or deterioration.

When considering changes in technology, it was found that all 8 savings

cooperatives in Loei province had improved their management technology. This was evident from the technological change index values exceeding 1 for each cooperative. This suggests that all the savings cooperatives in the province had undergone positive technological advancements in their management practices.

While examining the Total Factor Productivity Change (TFPC) for all savings cooperatives in Loei province, it was observed that the TFPC values for each cooperative are greater than 1. This indicated that all 8 savings cooperatives in the province had experienced an increase in efficiency in managing their operations. The Total Factor Productivity Change took into account changes in both technical efficiency and technological progress, suggesting an overall improvement in the productivity and management practices of the savings cooperatives in Loei province.

Part 2. The cost efficiency of savings cooperatives of Loei Provinces, Thailand would be expressed in table 4.

Savings Cooperatives Name	TE	AE	CE
Teachers' Savings Cooperative of Loei Province Limited	0.7340	0.7000	0.5130
Police Savings Cooperative of Loei Province Limited	0.2640	0.5090	0.1340
Hospital Savings Cooperative of Loei Province Limited	0.1920	0.1240	0.0240
Savings Cooperative of Loei Province Limited	1.0000	0.8810	0.8810
Military Savings Cooperative of Sri Song Rak Limited	0.0070	0.5190	0.0040
Teachers' Savings Cooperative of the Department of General Education, Loei Province Limited	1.0000	1.0000	1.0000
Public Health Savings Cooperative of Loei Province Limited	0.0030	0.3180	0.0010
Army Department Savings Cooperative No. 21 Limited	0.2600	0.1360	0.0350
Mean	0.4320	0.5230	0.3240

Source: Calculation

Noted

TE = Technical Efficiency

AE = Allocative Efficiency = CE/TE

CE = Cost Efficiency

According to table 4, the 8 savings cooperatives in Loei province were currently under consideration. They had an average technical efficiency of 43%, an average cost efficiency of 32%, and an overall average efficiency of 52%. Remarkably, only one savings cooperative, namely the Teachers' Savings Cooperative of Loei Province Limited, was found to be efficient across all three types (with TE, CE, and AE values equal to 1). Additionally, it is noted that, on the whole, the savings cooperatives in Loei province under consideration, totaling 7, exhibit higher levels of technical efficiency compared to cost efficiency. This suggests that these cooperatives tend to use input factors more than necessary.

Given the specified levels of input and output prices, it was recommended that the 7 savings cooperatives currently under consideration in Loei province should reduce their use of input factors, as indicated by the technical efficiency index values lower than one.

Apart from the fact that these 7 savings cooperatives in Loei province were currently overusing input factors, they also lack efficiency in managing and organizing these factors to achieve an appropriate balance. Thus, there was a need for these cooperatives to improve their management practices to achieve a more balanced and efficient use of resources at the same level.

In summary, the results obtained from the calculations indicate which savings cooperatives were less efficient in terms of technical efficiency, cost efficiency, and overall efficiency. Specifically, cooperatives with technical efficiency index values below one may be considered less efficient in utilizing input factors to produce outputs. Additionally, those cooperatives that exhibit a higher level of technical efficiency compared to cost efficiency suggest that they use input factors more than necessary. The overall efficiency reflects the combined performance in managing input factors and production outputs. Therefore, the analysis helped identify areas where savings cooperatives in Loei province may need to improve their operational efficiency and resource management.

Conclusions and Discussion

Savings cooperatives, functioning as member-owned financial institutions, play a vital role in enhancing financial inclusion and supporting community development. An examination of efficiency and technological changes using the Malmquist Data

Envelopment Analysis (DEA) method uncovered noteworthy findings in Loei province, Thailand. The analysis revealed that six savings cooperatives in Loei province exhibited a technological efficiency index greater than 1, indicating an enhancement in technological efficiency for these entities. On the other hand, two savings cooperatives had a technological efficiency index equal to 1, implying a stable level of technological efficiency with no discernible improvement or decline. Examining the Total Factor Productivity Change (TFPC) for all savings cooperatives in Loei province, it was observed that the TFPC values for each cooperative surpassed 1. This suggests that all eight savings cooperatives in the province experienced an upswing in efficiency in managing their operations. The TFPC considers changes in both technical efficiency and technological progress, pointing towards an overall improvement in the productivity and management practices of savings cooperatives in Loei province.

Eight savings cooperatives currently under consideration in Loei province exhibited certain efficiency metrics. On average, these cooperatives demonstrated a technical efficiency of 43%, a cost efficiency of 32%, and an overall efficiency averaging at 52%. The overall efficiency metric encompasses the collective performance in handling input factors and producing outputs. These findings from the analysis shed light on specific areas where savings cooperatives in Loei province might benefit from enhancing their operational efficiency and resource management. The breakdown of technical and cost efficiency provides valuable insights into the areas that may require attention for improvement, offering a targeted approach to optimize the overall performance of these financial institutions. The research results were consistent with the work of Sreethon, P. and Thoraneenitiyan, N. (2021). Who studied the measure of technical efficiency of large saving and credits cooperatives in Thailand. Purmiyati, A., Handoyo, R. D., and Wisudanto, A. (2022). Who studied technical efficiency analysis: management factor as determinants of saving and credit cooperatives' health in Indonesia. In addition, the research outputs were constent with Kimutai, C. J., Jagongo, A. and Kenyatta, O. (2019). Who studied technical efficiency of deposit taking savings and credit cooperative societies in Kenya.

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Factors Affecting the Business Operational Income of Agricultural Cooperatives in Kalasin Province, Thailand

Anucha Wittayakorn-Puripunpinyoo[1*]

[1] Associate Professor, School of Agriculture and Cooperatives, Sukhothai Thammathirat Open University.
***Corresponding author, E-mail:** puanucha@windowslive.com

Abstract

The research objective was to examine the factors affecting the business operational income of Agricultural Cooperatives in Kalasin province, Thailand. The secondary data were collected from the Cooperative Auditing Department database from 2010 to 2023 of 44 Agricultural Cooperatives. The total numbers accounted for 572 observations. The data were analyzed by econometric methodology to examine the factors affecting the business operational income of Agricultural Cooperatives in Kalasin Province, Thailand. Multiple linear regression analysis with the remove technique. The findings were factors that had a positive influence on business operational income which comprised of 4 factors, cash and bank deposits, net short-term receivables, net long-term receivables, and total funds of the cooperative. On the other hand, factors that had a negative influence on business operational income comprised of 8 factors, inventories, other current assets, long-term investment, other non-current assets, trade accounts payable, other cooperative deposits, long-term loan, and share capital. Agricultural Cooperatives in Kalasin province would take their consideration all 4 factors that would lead to an increase in their business operational income. Since business operational income expressed a financial status.

Keyword: Business Operational Income, Agricultural Cooperatives, Kalasin Province

Introduction

Kalasin is a province with abundant fertility in the northeastern region of Thailand. Archaeological evidence suggests that it was once inhabited by the Lawa tribe, which prospered culturally around 1600 years ago. Historically, it became a city during the reign of Rattanakosin. It is located on the left bank of the Mekong River (www.wordpress.com).

In the overall economic scenario and Gross Domestic Product (GDP) of Kalasin

province in the year 2022, it was noted that the average income per capita was $ 1222. The primary source of income stemmed from agriculture constituting 23.37 percent, with a calculated value of $289 million (www.wordpress.com).

Agriculture is the main source of income for the people of Kalasin province, Thailand. Farmers gathered them to form their business operation as "Agricultural Cooperatives" which has been encouraged and supported by the Cooperatives Promotion Department, The Ministry of Thailand. Agricultural cooperatives are formed by a group of individuals engaged in agricultural activities who come together, register as a legal entity with the cooperative registrar, and aim to collectively conduct activities and provide mutual assistance. The primary objective is to address challenges in the members' professional pursuits, fostering collaborative efforts to enhance the well-being and living standards of the cooperative members (www.cpd.go.th).

Agricultural cooperatives operate to promote collaborative business activities among members, providing mutual assistance and collective support. They strive to uphold principles of morality and ethical conduct, rooted in the fundamental values of humanity, aiming to generate benefits for both individual members and the collective as a whole. The ultimate goal is to enhance the overall quality of life for members, encompassing improvements in both economic and social aspects (www.cpd.go.th).

According to the Cooperative Promotion Department (2023), establishing agricultural cooperatives is crucial due to various significant challenges farmers commonly face in their professions, as stipulated in cooperative regulations: 1) Price Volatility, Farmers often encounter uncertainties in agricultural commodity prices, leading to potential losses or financial distress. Cooperatives can help mitigate this instability by collectively selling products or purchasing inputs in larger quantities to enhance the economic well-being of their members, 2) Access to Capital: Forming cooperatives assists farmers in accessing the necessary capital quickly. Members pool resources to fund various activities collectively, facilitating the smooth operation of their agricultural ventures, 3) Knowledge and Technology Gap: Agricultural cooperatives serve as platforms for the exchange of knowledge and technology among farmers. This fosters the sharing of experiences and the development of skills within the profession, 4) Operational Complexity: Some farmer groups may struggle to manage complex business activities independently. Cooperatives efficiently handle intricate operations, promoting effective and streamlined business practices, 5) Market Considerations: Market dynamics significantly impact agricultural product prices.

Cooperatives play a vital role in helping farmers analyze markets, enabling them to plan production that aligns with market demands. Also, the establishment of agricultural cooperatives is a beneficial measure to address challenges and promote sustainability in agricultural activities (Cooperative Promotion Department, 2023).

Following the Cooperative Promotion Department (2023), addressing the general challenges faced by farmers, as mentioned earlier, is a complex task for individual farmers. The successful resolution of these issues requires collaborative efforts and one effective approach is for farmers to join forces by forming cooperatives and registering them following the Cooperatives Act of 1999. This is because cooperatives can assist in solving various problems, including:

1) Purchasing Business: Through cooperative efforts, farmers can collectively procure agricultural materials and equipment, such as fertilizers, pesticides, seeds, and essential supplies. The cooperative, after assessing the members' needs, becomes the entity responsible for procuring and supplying these items. Collective purchasing in large quantities allows for lower prices, and any profits at the end of the year can be distributed back to the members (Cooperative Promotion Department, 2023).

2) Sales or Harvest Collection Business: Establishing a cooperative for the sale or collection of produce empowers farmers in negotiation. This ensures that the agricultural products are sold at fair prices, and members are not exploited by traders in terms of weighing, measuring, or pricing. The formation of agricultural cooperatives provides a practical avenue for farmers to collectively address and resolve challenges. It enables them to pool resources, negotiate better terms, and create a more sustainable and equitable agricultural environment (Cooperative Promotion Department, 2023).

3) Financial Business (Credit) of (1) Loan Services: Agricultural cooperatives, when farmers come together as a cooperative, can build trust with financial institutions, government agencies, and the general public. The cooperative can secure low-interest loans for its members to invest in agriculture. The cooperative evaluates loan requests based on members' business plans or utilization plans. For instance, loans may be provided to members for purchasing agricultural materials, essential family expenses, land improvement, or acquiring agricultural land. This is particularly beneficial for members who do not own sufficient land for farming. (2) Deposit Services: To promote financial awareness

and encourage capital accumulation within the cooperative, the cooperative accepts deposits from its members. There are two types of deposits: savings deposits and fixed deposits. The cooperative pays interest at rates comparable to commercial banks, aiming to demonstrate the benefits of saving. (3) Occupational Promotion and Cooperative Services Business, The cooperative may establish a dedicated team of experts in agriculture to provide knowledge and advice on agricultural practices. Alternatively, collaboration with other government agencies can be sought to offer consultation services. This aims to ensure that members have a good understanding of new agricultural techniques and are capable of planning their production to meet market demands. Additionally, the cooperative may promote supplementary income-generating activities for household groups, empowering them to enhance their family income (Cooperative Promotion Department, 2023).

4) Education and Training: The cooperative will organize educational and training programs for its members, the cooperative board, and staff consistently. This initiative aims to ensure that stakeholders are informed about the principles, methods, rights, duties, and responsibilities within the cooperative. By providing knowledge and skills, the cooperative contributes to improving the quality of life and well-being of farmers within the community or society. It aspires to create a happier society where the children and grandchildren of the cooperative members receive higher education and enjoy better health due to the improved living standards of the farmers (Cooperative Promotion Department, 2023).

According to the Cooperative Auditing Department database from 2010 to 2023, there are 44 Agricultural Cooperatives in Kalasin province, Thailand expressing their business operational income in Table 1:

Table 1. The Business income, Growth Rate and Trend from 2010 to 2023

year	Income ($)	Growth Rate (%)
2010	1,046,686.33	
2011	787,327.74	-24.779
2012	1,347,419.21	71.138
2013	1,505,908.96	11.762
2014	1,549,812.27	2.915

2015	1,122,000.00	-27.604
2016	973,506.16	-13.235
2017	1,481,996.27	52.233
2018	573,553.52	-61.299
2019	1,132,125.98	97.388
2020	1,653,207.75	46.027
2021	1,588,403.55	-3.920
2022	1,321,935.86	-16.776
2023	1,567,769.19	18.596
Maximum	1,653,207.75	97.39
Minimum	573,553.52	-61.30
Range	1,079,654.24	36.09
Average	1,260,832.34	11.73
Standard Deviation	330,500.94	44.44

Source: [1] Cooperative Auditing Department Database, 2023

[2] Calculation

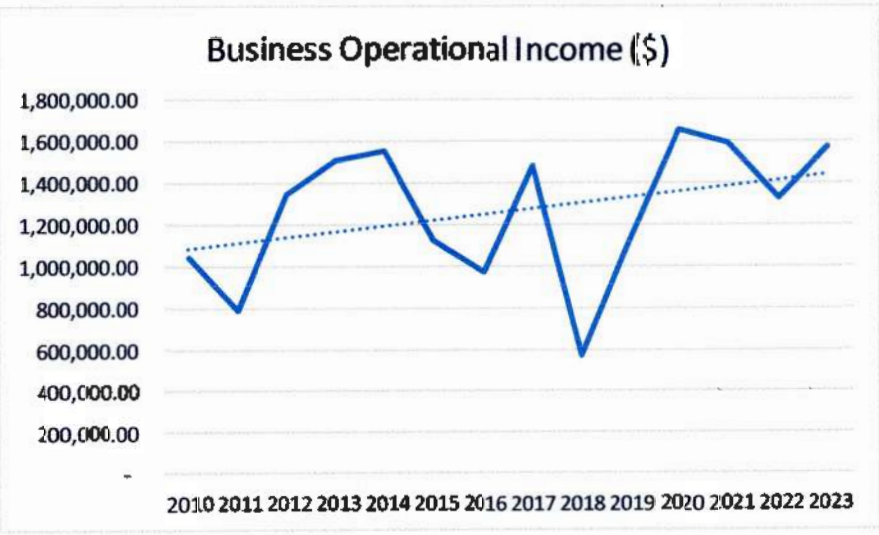


Figure 1 Business Income and Trend of Agricultural Cooperatives in Kalasin Province, Thailand

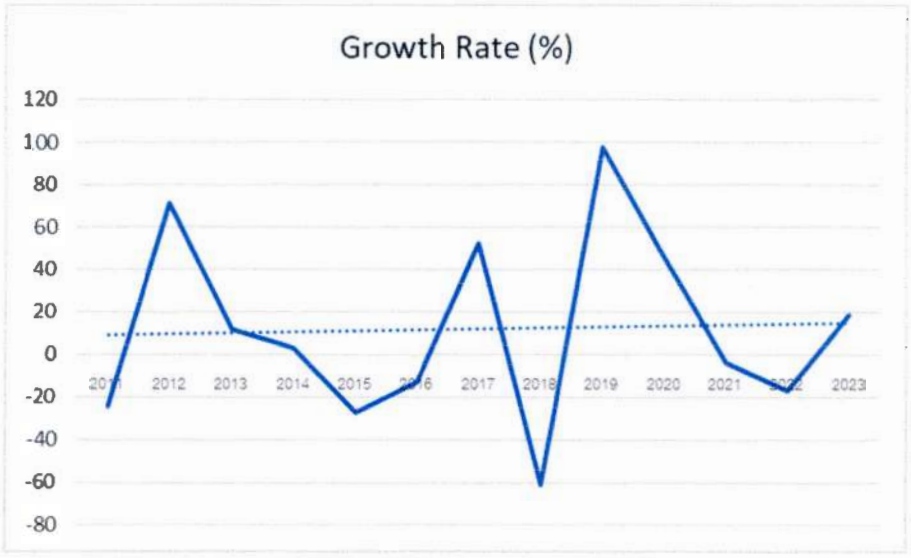


Figure 2 The Growth Rate of Business Income and Trend of Agricultural Cooperatives in Kalasin Province, Thailand

According to Table 1 and figure 1 and 2, from 2010 to 2023, the business income of Agricultural Cooperatives in Kalasin province showed a maximum value of $1,653,207.75 and a minimum value of $573,553.52 with a range of $1,079,654.24. The average and standard deviation of $1,260,832.34 and $330,500.94 respectively. It obviously showed that there was a big gap between the maximum and minimum value of business income over 13 years. Also, the growth rate of agricultural cooperatives' business income has been fluctuating from the maximum rate of 97.39 percent and minimum rate of - 61.30 percent. There has been a big difference in the growth rate of business income in the last 13 years of Agricultural Cooperatives in Kalasin province, Thailand. The business operational income is a vital instrument for business proprietors to evaluate their capacity to generate profits, whether by boosting revenues, reducing costs, or employing a combination of both strategies. Additionally, it offers valuable insights into the effectiveness of the business's implemented strategies at the commencement of a financial period.

In this research work, with the fluctuation of business income of Agricultural Cooperatives, the research addressed this problem and attempted to find out what factors

affect the business operational income of Agricultural Cooperatives in Kalasin Province, Thailand.

Literature Review

1. Brief Overview of Cooperatives and Their Historical Significance

Cooperatives are autonomous associations of individuals united voluntarily to meet common economic, social, and cultural needs through jointly owned and democratically controlled enterprises. They operate based on the values of self-help, self-responsibility, democracy, equality, equity, and solidarity. The history of cooperatives dates back to the 19th century, emerging as a response to the economic challenges and social inequalities brought about by the Industrial Revolution (Holyoake, G. J. 1906).

The concept of cooperatives gained prominence through the efforts of pioneers such as the Rochdale Society of Equitable Pioneers, founded in 1844 in Rochdale, England. This cooperative, recognized as the birthplace of the modern cooperative movement, established principles that form the foundation of contemporary cooperative enterprises. The Rochdale Principles include open membership, democratic control, distribution of surplus in proportion to transactions, and concern for the community (Holyoake, G. J. 1906). Cooperatives have played a crucial role in addressing economic and social challenges globally. In the late 19th and early 20th centuries, agricultural cooperatives emerged to empower farmers, enabling them to collectively market their produce and access resources. The cooperative movement expanded across various sectors, including banking, housing, and consumer goods, contributing to community development and poverty alleviation (Foner, P. S, 1994).

During the Great Depression, cooperatives provided a lifeline for many communities, offering stability and resilience in times of economic downturn. In the developing world, cooperatives became instrumental in promoting sustainable development, empowering marginalized groups, and fostering local economies (Foner, P. S, 1994). Cooperatives continue to be relevant in the 21st century, addressing contemporary challenges such as income inequality, environmental sustainability, and social inclusion. As hybrid models that blend economic success with social responsibility, cooperatives remain a viable and influential force in shaping more equitable and sustainable societies (Birchall, J, 2003).

Agricultural cooperatives are collective enterprises formed by farmers to address common challenges, enhance their bargaining power, and promote sustainable agricultural

practices. This form of cooperation dates back to the late 19th century when farmers recognized the need to organize for mutual benefit (Danbom, D. B, 1981). One of the earliest and influential examples of agricultural cooperatives is the "Grange Movement" in the United States during the 1860s. The Grange, officially known as the Patrons of Husbandry, established cooperatives to provide farmers with a unified voice in the face of economic injustices. This movement laid the groundwork for the development of various agricultural cooperatives globally (Danbom, D. B, 1981).

According to the World Bank. (2008), Agricultural cooperatives play a crucial role in improving the economic conditions of farmers. By pooling resources, farmers can collectively purchase inputs, access credit, and efficiently market their produce. Research indicates that agricultural cooperatives contribute significantly to the income and livelihoods of their members, fostering economic sustainability in rural communities. Following Defourny, J., & Develtere, P. (1999), Agricultural cooperatives are instrumental in promoting social cohesion and community development in rural areas. Through shared ownership and democratic governance, these cooperatives empower farmers, particularly smallholders, by providing them with a platform to voice their concerns and participate in decision-making processes. Agricultural cooperatives often embrace sustainable farming practices. By promoting organic farming, resource conservation, and environmentally friendly production methods, these cooperatives contribute to long-term ecological balance and resilience in agriculture (Sexton, R. J., & Lavoie, N, 2001).

Despite their numerous benefits, agricultural cooperatives face challenges such as management issues, market access, and policy support. Ongoing research explores innovative solutions and policy recommendations to strengthen the resilience and effectiveness of agricultural cooperatives in the face of evolving agricultural landscapes (Fulton, M., & Gibbons, A, 2001). Agricultural cooperatives stand as dynamic entities that not only contribute to the economic well-being of farmers but also play a pivotal role in fostering social cohesion and environmental sustainability in rural communities. Ongoing research continues to shape the policies and practices supporting the growth and resilience of agricultural cooperatives globally.

2. Agricultural Cooperatives in Thailand: Catalysts for Rural Development

Agricultural cooperatives in Thailand have played a vital role in fostering rural development, empowering farmers, and enhancing the overall sustainability of the agricultural sector. This overview delves into the historical context, economic impact, and

challenges faced by these cooperatives, drawing on relevant research and literature (Sorajjakool, S, 2002).

Following Sorajjakool, S. (2002), the cooperative movement in Thailand has roots dating back to the mid-20th century, with early initiatives aiming to improve the economic conditions of farmers. The establishment of agricultural cooperatives gained momentum, particularly during the 1960s and 1970s, as the government recognized the potential of cooperatives in uplifting rural communities. According to Pananond, P., & Hahn, K. H. (2017), their research indicates that agricultural cooperatives in Thailand contribute significantly to the economic well-being of farmers. These cooperatives enable smallholder farmers to pool resources, access credit, and collectively market their produce, resulting in increased income and improved livelihoods.

Tanasupawat, W., & Trueblood, M. A. (2001) stated that Agricultural cooperatives serve as agents of social cohesion and community development. Through democratic governance structures, these cooperatives empower farmers, particularly in decision-making processes. This inclusive approach helps build resilient and self-reliant rural communities. Despite their positive impact, agricultural cooperatives in Thailand face challenges, including management issues, market access, and external support. Ongoing research explores solutions to these challenges, emphasizing the need for effective policies and capacity-building initiatives (Ito, J, 2016). In addition, Government policies have played a crucial role in shaping the landscape of agricultural cooperatives in Thailand. Research highlights the importance of supportive policies that facilitate the growth and sustainability of these cooperatives (Pholsena, S, 2010).

Following the work of Supasri, A., & Trueblood, M. A. (2001), Agricultural cooperatives in Thailand stand as integral components of rural development, contributing to economic growth, social empowerment, and environmental sustainability. Ongoing research and strategic policy interventions are essential to address challenges and further enhance the impact of these cooperatives on the Thai agricultural landscape.

3. **Business Operational Income**

Operational income, often referred to as operating income or operating profit, is a key financial metric that reflects a company's profitability from its core operations. It is calculated by subtracting operating expenses from gross profit. Operating income excludes non-operating items such as interest and taxes, providing a clearer picture of a company's ability to generate profit from its main activities (Brigham, E. F., & Houston, J. F, 2009).

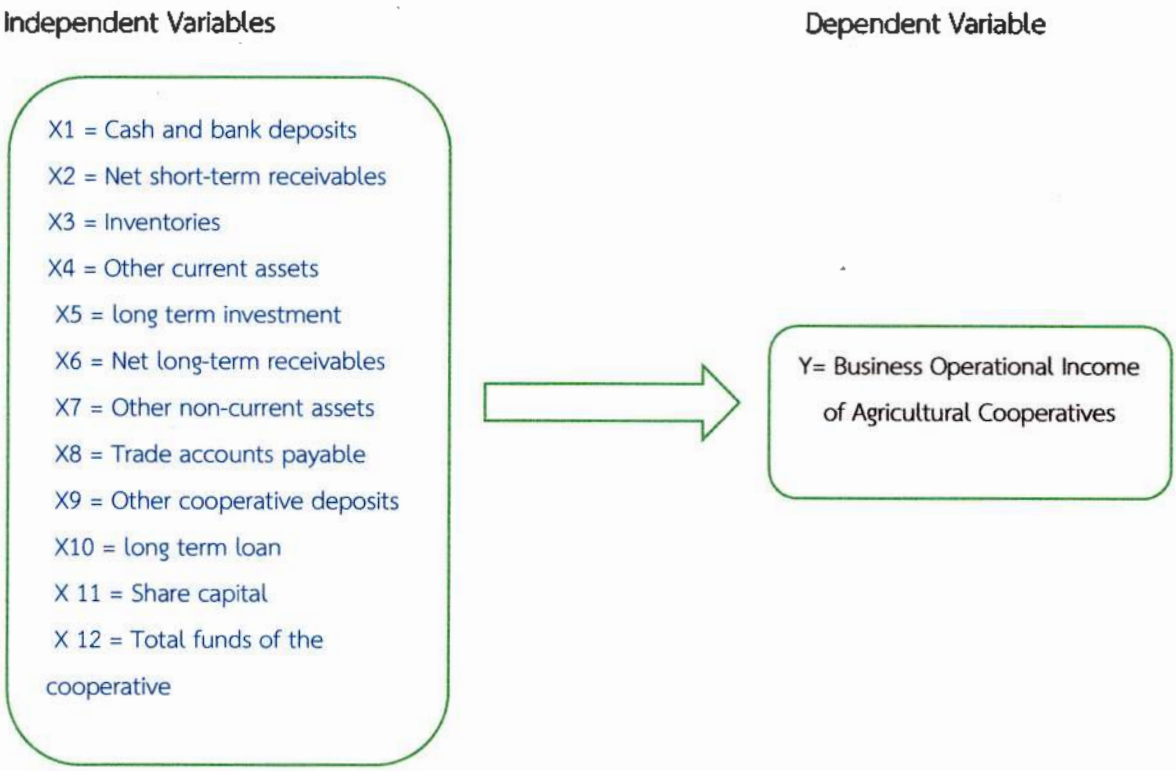
Following Gitman, L. J., & Zutter, C. J. (2015), the component of operational Income was Gross Profit: The difference between revenue and the cost of goods sold (COGS). It represents the direct profit from the production of goods or services. Operating Expenses: These include expenses related to day-to-day business operations, such as salaries, rent, utilities, and marketing. Operating Income: Calculated by subtracting operating expenses from gross profit, this figure represents the profit generated from a company's core operations.

Ross, S. A., Westerfield, R. W., & Jordan, B. D. (2015) stated that profitability assessment: operational income is a key indicator of a company's profitability and efficiency in managing its core business functions. Investors often use operational income to evaluate a company's operational efficiency and its ability to generate profit before considering non-operational factors. Comparative analysis of operational income over different periods allows for assessing business performance trends. Following Horngren, C. T., Datar, S. M., & Rajan, M. V. (2015), understanding operational income is essential for businesses to make informed decisions, attract investors, and ensure sustainable profitability. The provided sources offer a foundation for further exploration into this critical financial metric. Controlling operating expenses is crucial to maintaining and improving operational income. External factors, such as changes in market conditions, can impact operational income.

Objectives

The research objective was to examine the factors affecting the business operational income of Agricultural Cooperatives in Kalasin province, Thailand.

Concept theory framework



Materials and Methods

Methodology

The methodology was quantitative research applying the econometric methodology to examine the factors affecting the business operational income of Agricultural Cooperatives in Kalasin Province, Thailand. The presentation of the research methodology study and its details unfolded in the following manner:

3. Data Collection

The secondary data were collected from the Cooperative Auditing Department database from 2010 to 2023 comprised of 1) Cash and bank deposits, 2) Net short-term receivables, 3) Inventories, 4) Other current assets, 5) long-term investment, 6) Net long-term receivables, 7) Other non-current assets, 8) Trade accounts payable, 9) Other cooperative deposits, 10) long term loan, 11) Share capital, 12) Total funds of the cooperative, and business operational income of 44 Agricultural Cooperatives in Kalasin

province, Thailand. With 13 years and 44 Agricultural Cooperatives, the total numbers accounted for 572 observations.

4. Data Analysis

The data were analyzed by econometric methodology to examine the factors affecting the business operational income of Agricultural Cooperatives in Kalasin Province, Thailand. Multiple linear regression analysis with the remove technique.

Results

Following the research objective, factors affecting the business operational income of Agricultural Cooperatives in Kalasin Province, Thailand will be expressed in table 2 as follows:

Table 2. Factors Affecting the Business Operational Income of Agricultural Cooperatives in Kalasin province, Thailand

n. = 572

Dependent Variable: Business Operational Income of Agricultural Cooperatives (Y)			
Independent Variables (X)	Description	Coefficients	T-value
X1	Cash and bank deposits	0.081	14.27**
X2	Net short-term receivables	0.148	22.65**
X3	Inventories	-0.111	19.87*
X4	Other current assets	-0.209	23.67**
X5	long term investment	-0.22	25.46**
X6	Net long-term receivables	0.777	32.48**
X7	Other non-current assets	-0.948	31.23**
X8	Trade accounts payable	-0.222	24.45**
X9	Other cooperative deposits	-0.283	16.57*
X10	long term loan	-0.113	18.63*
X11	Share capital	-0.284	19.59*
X12	Total funds of the cooperative	0.002	22.46**

Cooperatives in Suphanburi Province, Thailand.

On the other hand, Agricultural Cooperatives would take their consideration factors affecting business operational income in the negative influence. This meant that all of the 8 factors that had a negative influence on business operational income would be reduced to increase the business operational income. This research outcome was consistent with the work of Sala-Ríos, M. (2023) who studied the determinants affecting cooperatives' profitability. Evidence from Spain.

Conclusions and Discussion

According to research outcomes, some factors influenced the business operational income of Agricultural Cooperatives in Kalasin province, Thailand. There were 4 out of 12 factors that had a positive influence on the business operational income which were the net long-term receivables, cash and bank deposits, net short-term receivables, and total funds of the cooperatives. Agricultural Cooperatives in Kalasin province would take their consideration all 4 factors that would lead to an increase in their business operational income. Since, business operational income expressed a financial status that presents Agricultural Cooperatives revenues and expenses, indicating whether the Agricultural Cooperatives have incurred a profit or a loss during a specific period. The business operational income assists Agricultural Cooperatives in determining the feasibility of generating profits through strategies such as revenue enhancement, cost reduction, or a combination of both In addition all of Agricultural Cooperatives would consider all of these 4 factors to put in the strategic plan of their business strategy to make their implementation finally. It was consistent with the works of Mahazril Aini Y., Hafizah H.A.K, & Zuraini Yc (2012). Who studied factors affecting Cooperatives performance in relation to strategic planning and members' participation in Malaysia. Also, it was consistent with the work of Wittayakorn-Puripunpinyoo, A. (2022). Who studied the measurement of technical efficiency and factors affecting the operational efficiency of Savings Cooperatives in Kalasin province, Thailand.

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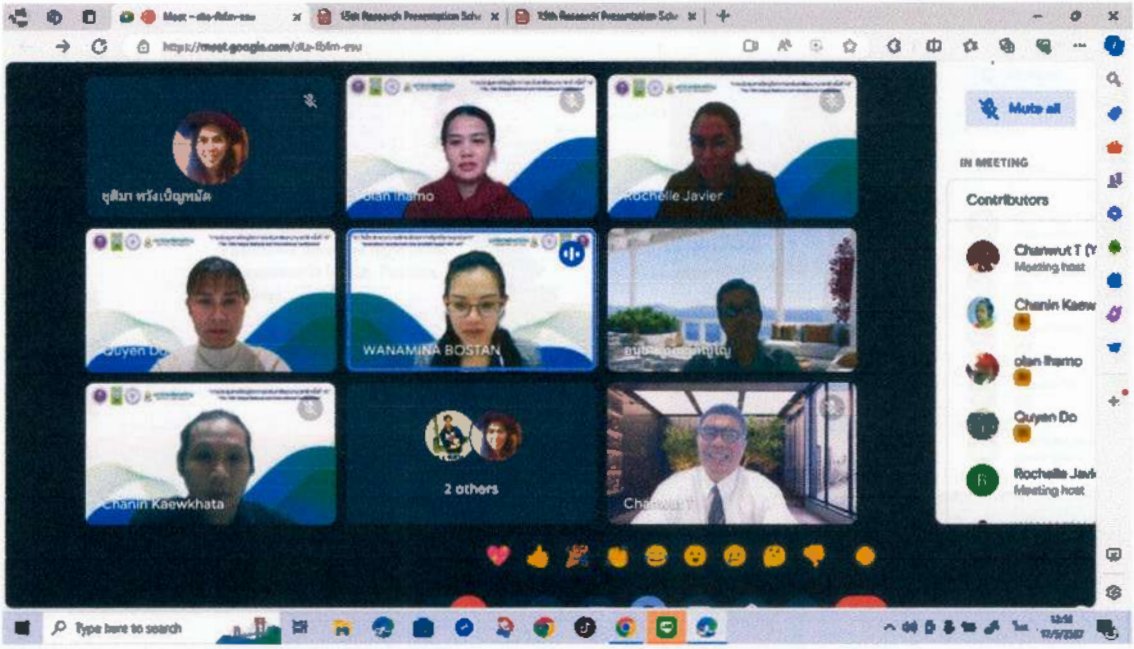

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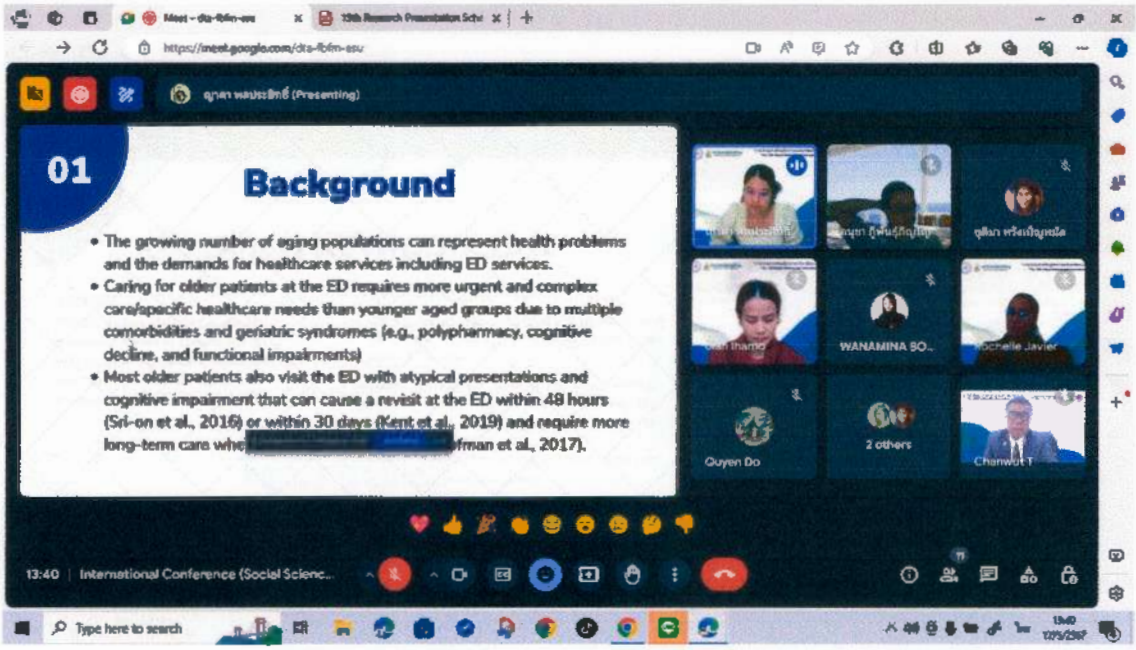
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• The growing number of aging populations can represent health problems and the demands for healthcare services including ED services.
• Caring for older patients at the ED requires more urgent and complex care/specific healthcare needs than younger aged groups due to multiple comorbidities and geriatric syndromes (e.g., polypharmacy, cognitive decline, and functional impairments)
• Most older patients also visit the ED with atypical presentations and cognitive impairment that can cause a revisit at the ED within 48 hours (Sri-on et al., 2016) or within 30 days (Kent et al., 2019) and require more long-term care
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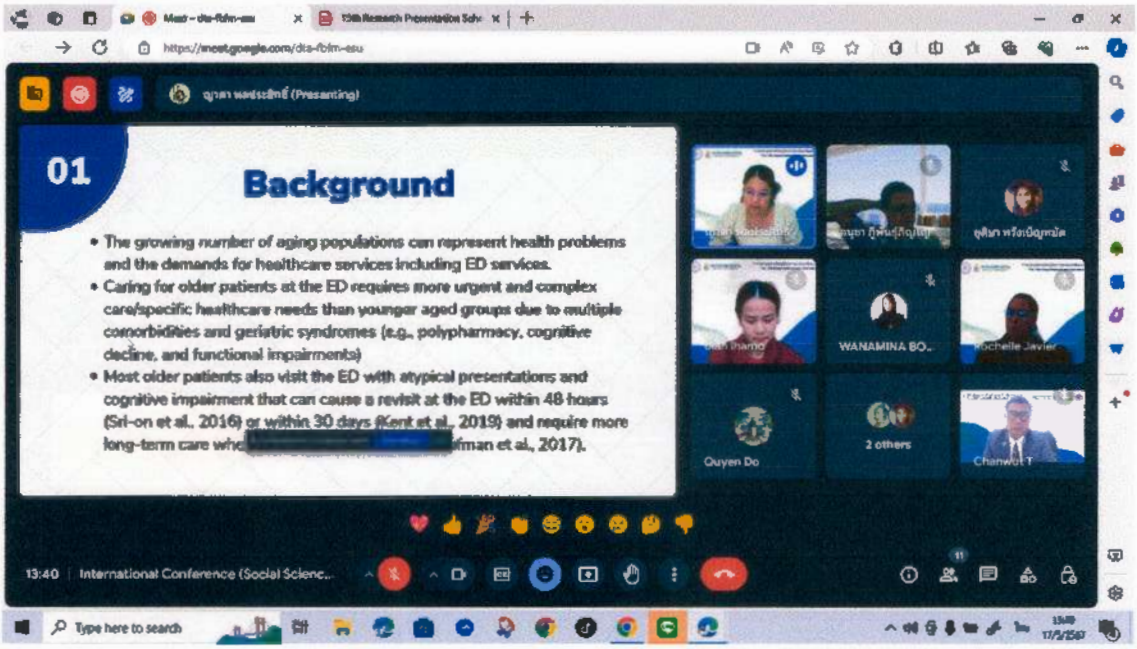
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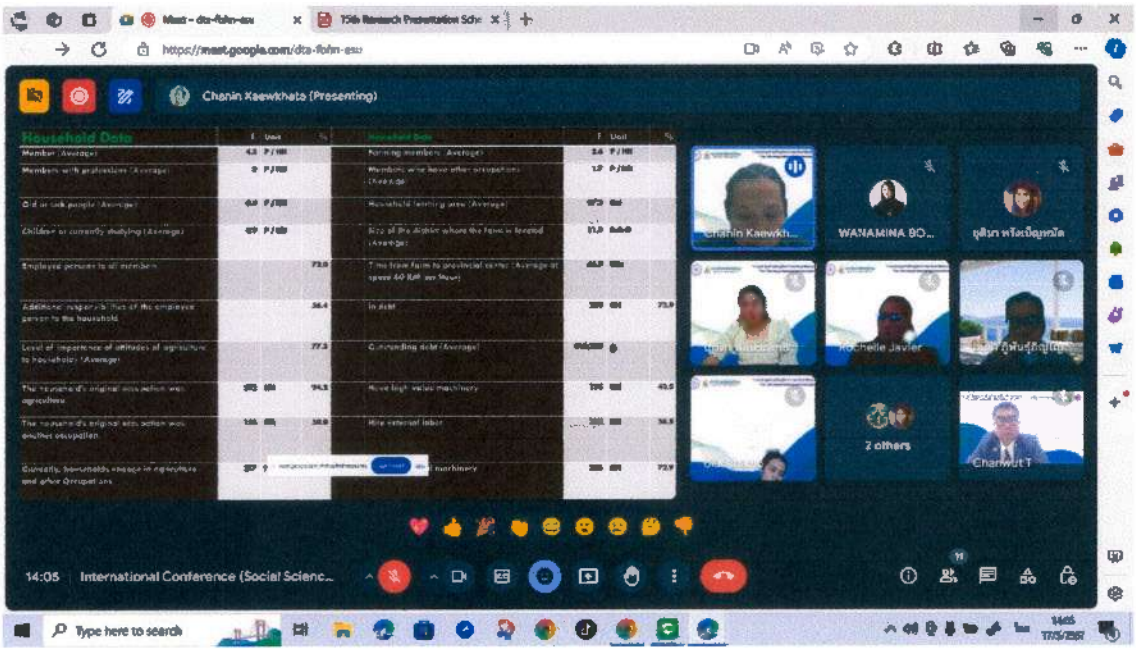

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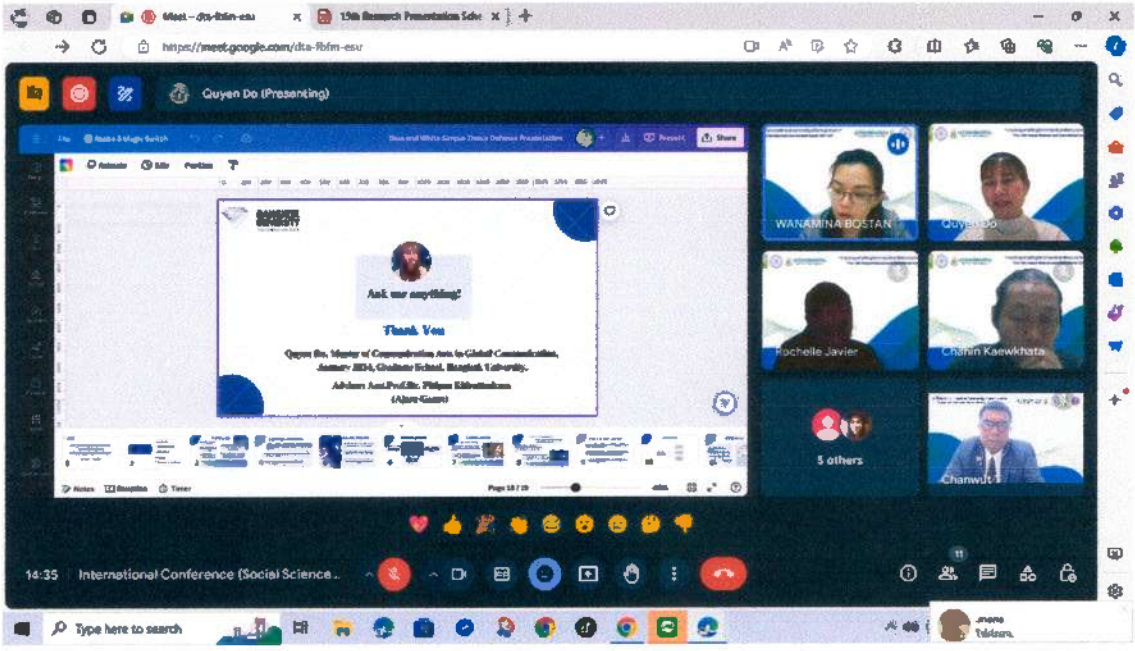

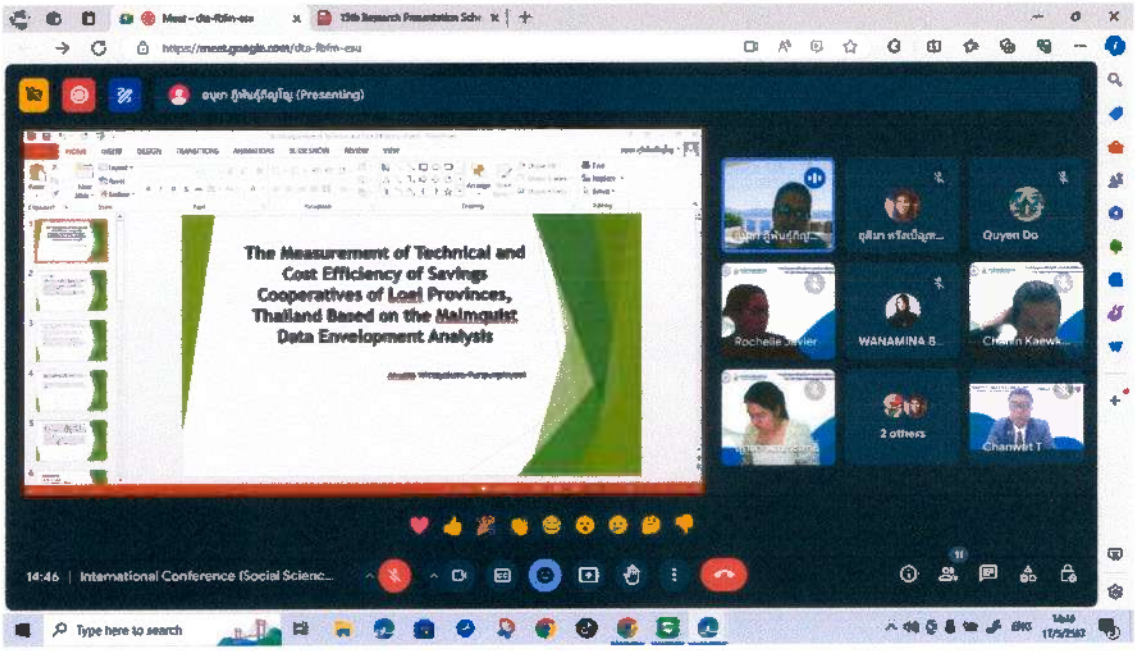

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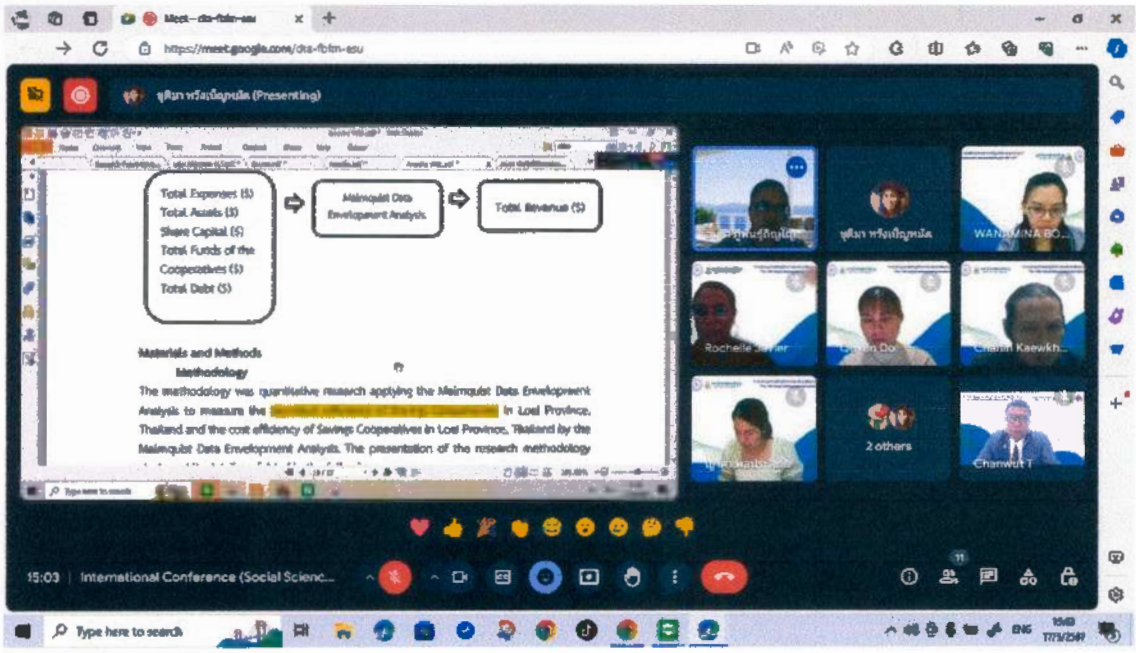

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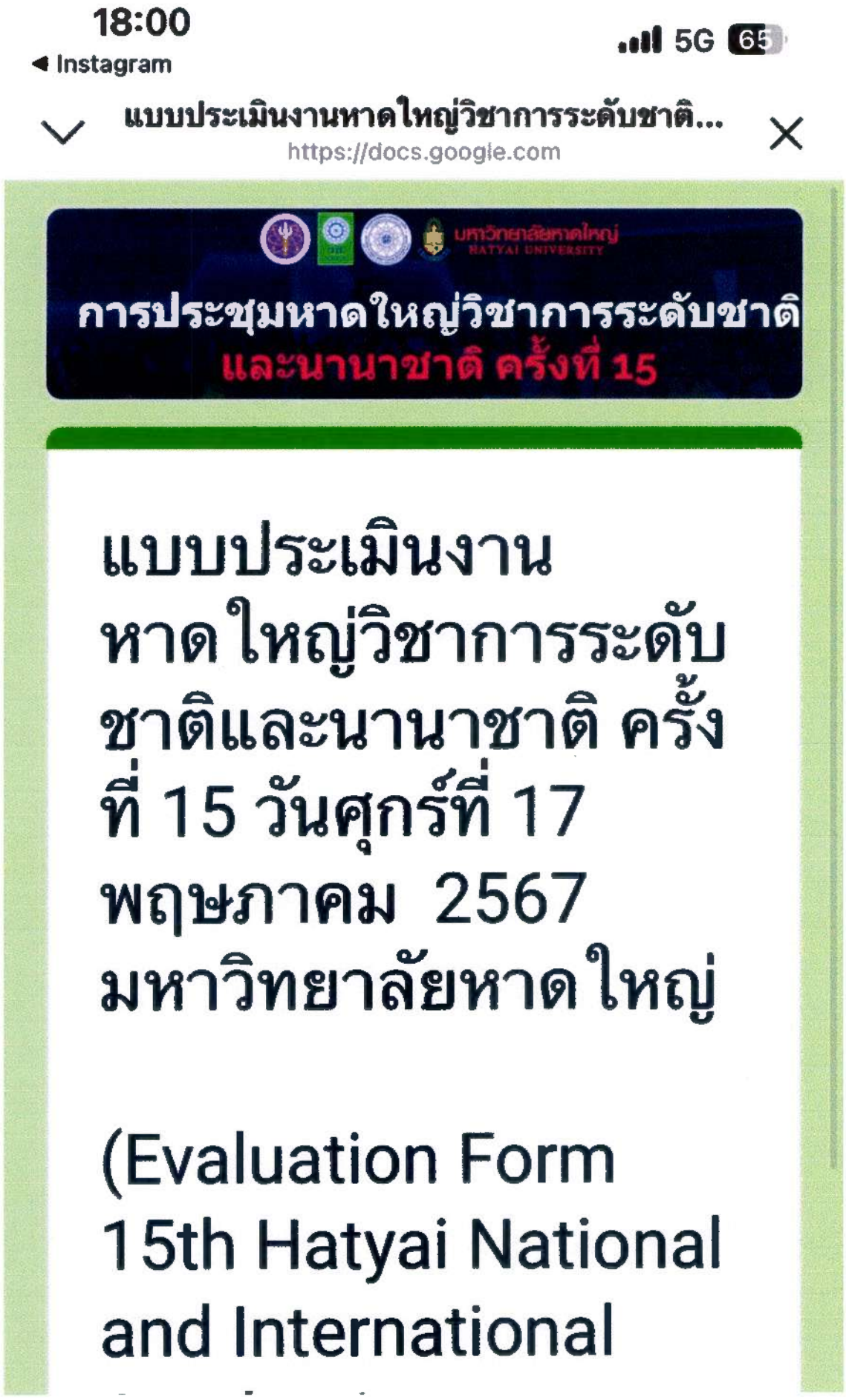
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ได้รับเงินจาก / Received from : Assoc. Prof. Dr. Anusha Wittayakorn-Puripunpinyoo

เลขที่ผู้เสียภาษี :

ที่อยู่ : School of Agriculture and Cooperatives, Sukhothai Thammathirat Open University

รายการ Description	จำนวนเงินรวม Amount
ค่าลงทะเบียน การประชุมหาดใหญ่วิชาการระดับชาติและนานาชาติ ครั้งที่ 15	7,000.00
รวมทั้งสิ้น / Total เจ็ดพันบาทถ้วน	7,000.00

ลงชื่อ ....

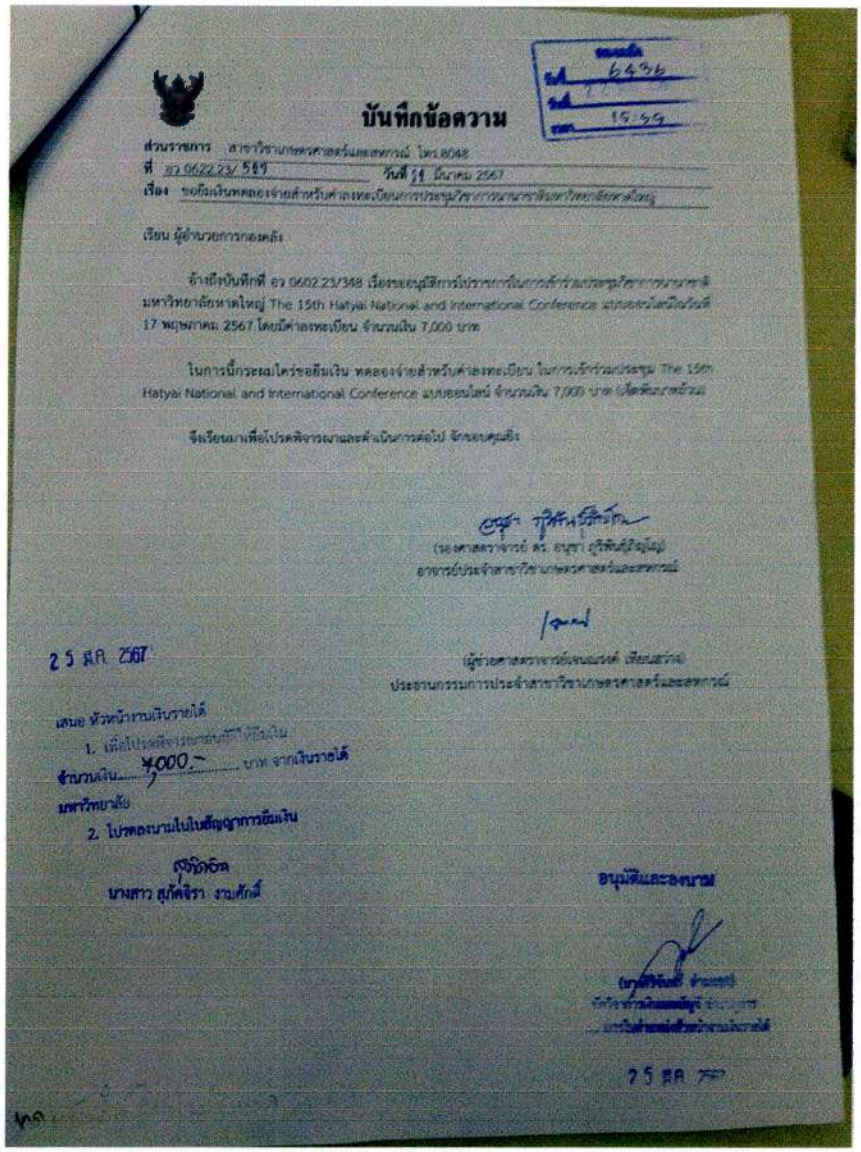
(น.ส.โฉมยง แก้วคง)
ผู้รับเงิน

ใบประกาศบทความวิจัยดีเด่นในการนำเสนอผลงาน

ใบประกาศบทความวิจัยในการนำเสนอผลงาน (บทความวิจัยที่ 1)

ใบประกาศบทความวิจัยในการนำเสนอผลงาน (บทความวิจัยที่ 2)

เอกสารการเงินการยืมเงินและการเคลียร์เงินจากกองคลัง



บันทึกข้อความ

ส่วนราชการ สาขาวิชาเภสัชศาสตร์และสหเวช โทร.8068
ที่ อว 0622.23/ 589 วันที่ 11 มีนาคม 2567
เรื่อง ขอยืมเงินทดลองจ่ายสำหรับค่าลงทะเบียนการประชุมวิชาการนานาชาติมหาวิทยาลัยหาดใหญ่

เรียน ผู้อำนวยการกองคลัง

อ้างถึงบันทึกที่ อว 0602.23/348 เรื่องขออนุมัติการไปราชการเข้าร่วมประชุมวิชาการนานาชาติ มหาวิทยาลัยหาดใหญ่ The 15th Hatyai National and International Conference แบบออนไลน์ในวันที่ 17 พฤษภาคม 2567 โดยมีค่าลงทะเบียน จำนวนเงิน 7,000 บาท

ในการนี้กระผมใคร่ขอยืมเงิน ทดลองจ่ายสำหรับค่าลงทะเบียน ในการเข้าร่วมประชุม The 15th Hatyai National and International Conference แบบออนไลน์ จำนวนเงิน 7,000 บาท (เจ็ดพันบาทถ้วน)

จึงเรียนมาเพื่อโปรดพิจารณาและดำเนินการต่อไป จักขอบคุณยิ่ง

(รองศาสตราจารย์ ดร. อนุชา ภูริพันธุ์ภิญโญ)
อาจารย์ประจำสาขาวิชาเภสัชศาสตร์และสหเวช

25 มีค 2567

(ผู้ช่วยศาสตราจารย์เชนเนตร์ เทียนสว่าง)
ประธานกรรมการประจำสาขาวิชาเภสัชศาสตร์และสหเวช

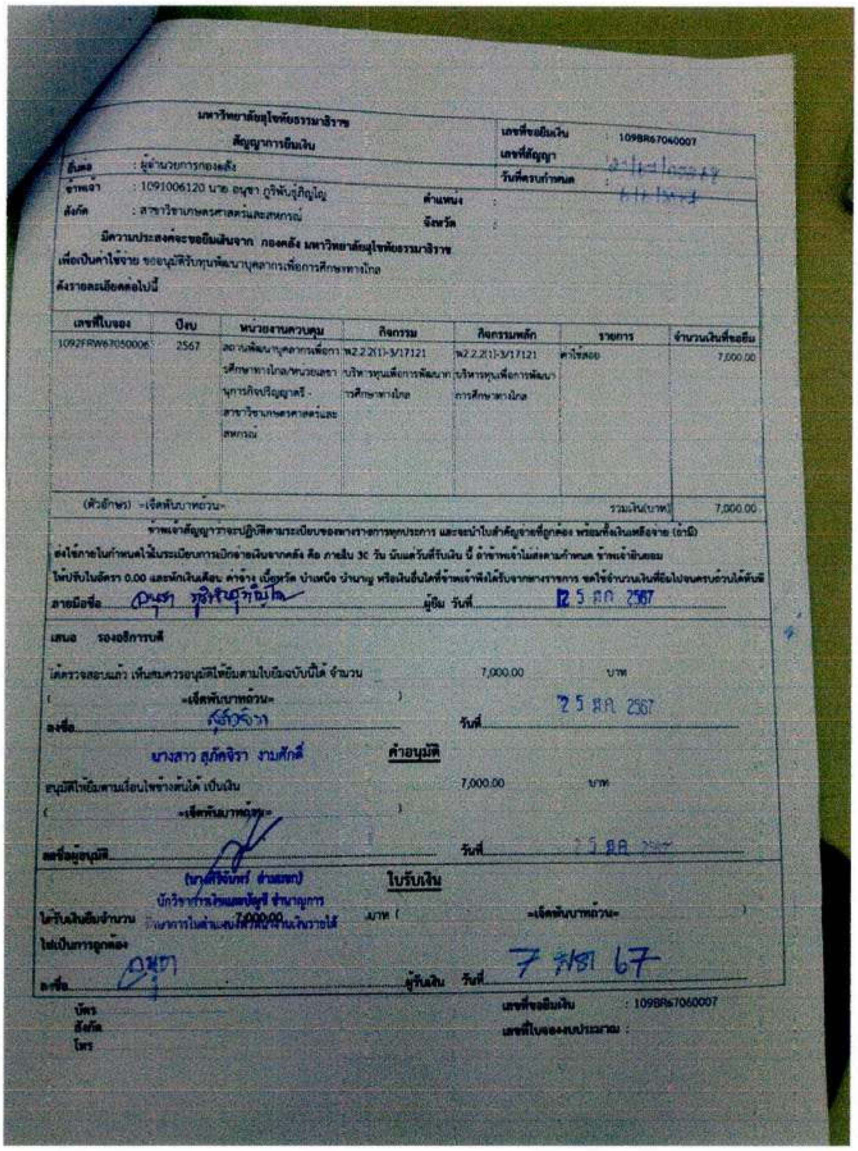
เสนอ หัวหน้างานเงินรายได้
1. เพื่อโปรดพิจารณาอนุมัติให้ยืมเงิน
จำนวนเงิน 7,000.- บาท จากเงินรายได้
มหาวิทยาลัย
2. โปรดลงนามในใบสัญญาการยืมเงิน

สุภัคจิรา
นางสาว สุภัคจิรา งามศักดิ์

อนุมัติและลงนาม

25 มีค 2567

รายงานฉบับสมบูรณ์การเข้าร่วมประชุมและนำเสนอผลงานวิจัย The 15th Hatyai International Conference. (รูปแบบ Online) ระหว่างวันที่ 17 พฤษภาคม 2567 รศ ดร. อนุชา ภูริพันธุ์ภิญโญ



มหาวิทยาลัยสุโขทัยธรรมาธิราช
สัญญาการยืมเงิน

เลขที่ขอยืมเงิน 109BR67060007
เลขที่สัญญา
วันที่ครบกำหนด :

ยื่นต่อ : ผู้อำนวยการกองคลัง
ข้าพเจ้า : 1091006120 นาย อนุชา ภูริพันธุ์ภิญโญ ตำแหน่ง :
สังกัด : สาขาวิชาเกษตรศาสตร์และสหกรณ์ จังหวัด :

มีความประสงค์จะขอยืมเงินจาก กองคลัง มหาวิทยาลัยสุโขทัยธรรมาธิราช
เพื่อเป็นค่าใช้จ่าย ขออนุมัติรับทุนพัฒนาบุคลากรเพื่อการศึกษาทางไกล
ดังรายละเอียดต่อไปนี้

เลขที่ใบจอง	ปีงบ	หน่วยงานควบคุม	กิจกรรม	กิจกรรมหลัก	รายการ	จำนวนเงินที่ขอยืม
1092FRW67050006	2567	สถานพัฒนาบุคลากรเพื่อการศึกษาทางไกล/หน่วยเลขานุการกิจปริญญาตรี - สาขาวิชาเกษตรศาสตร์และสหกรณ์	พ2.2.2(1)-3/17121 บริหารทุนเพื่อการพัฒนาการศึกษาทางไกล	พ2.2.2(1)-3/17121 บริหารทุนเพื่อการพัฒนาการศึกษาทางไกล	ค่าใช้สอย	7,000.00
(ตัวอักษร) =เจ็ดพันบาทถ้วน=					รวมเงิน(บาท)	7,000.00

ข้าพเจ้าสัญญาว่าจะปฏิบัติตามระเบียบของทางราชการทุกประการ และจะนำใบสำคัญจ่ายที่ถูกต้อง พร้อมทั้งเงินเหลือจ่าย (ถ้ามี) ส่งใช้ภายในกำหนดไว้ในระเบียบการเบิกจ่ายเงินจากคลัง คือ ภายใน 30 วัน นับแต่วันที่รับเงิน นี้ ถ้าข้าพเจ้าไม่ส่งตามกำหนด ข้าพเจ้ายินยอมให้ปรับในอัตรา 0.00 และหักเงินเดือน ค่าจ้าง เบี้ยหวัด บำเหน็จ บำนาญ หรือเงินอื่นใดที่ข้าพเจ้าพึงได้รับจากทางราชการ ชดใช้จำนวนเงินที่ยืมไปจนครบถ้วนได้ทันที

ลายมือชื่อ อนุชา ภูริพันธุ์ภิญโญ ผู้ยืม วันที่ 25 ต.ค. 2567

เสนอ รองอธิการบดี

ได้ตรวจสอบแล้ว เห็นสมควรอนุมัติให้ยืมตามใบยืมฉบับนี้ได้ จำนวน 7,000.00 บาท
(=เจ็ดพันบาทถ้วน=)
ลงชื่อ สุภัคจิรา วันที่ 25 ต.ค. 2567
นางสาว สุภัคจิรา งามศักดิ์

คำอนุมัติ

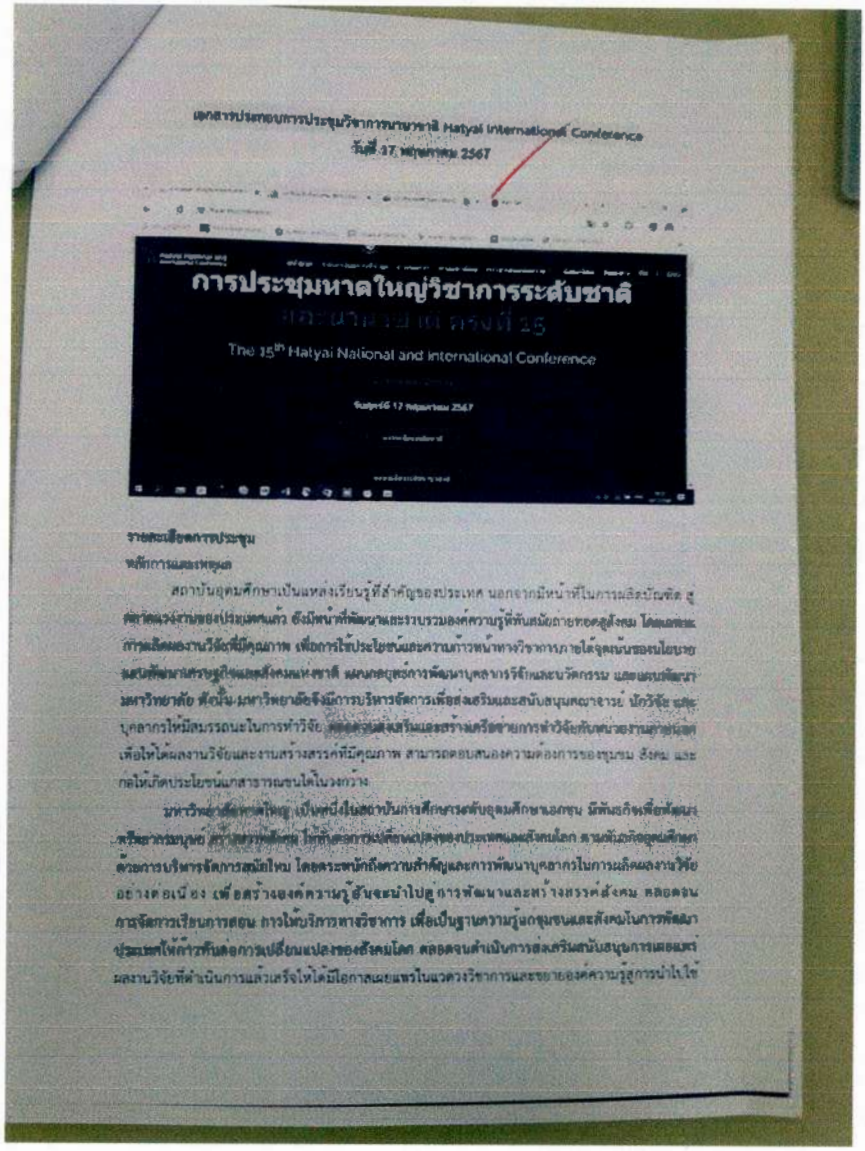
อนุมัติให้ยืมตามเงื่อนไขข้างต้นได้ เป็นเงิน 7,000.00 บาท
(=เจ็ดพันบาทถ้วน=)
ลงชื่อผู้อนุมัติ วันที่ 25 ต.ค. 2567

ใบรับเงิน

ได้รับเงินยืมจำนวน 7,000.00 บาท (=เจ็ดพันบาทถ้วน=)
ไว้เป็นการถูกต้อง
ลงชื่อ อนุชา ผู้รับเงิน วันที่ 7 พ.ย. 67

บัตร
สังกัด
โทร

เลขที่ขอยืมเงิน : 109BR67060007
เลขที่ใบจองงบประมาณ :



เอกสารประกอบการประชุมวิชาการนานาชาติ Hatyai International Conference
วันที่ 17 พฤษภาคม 2567

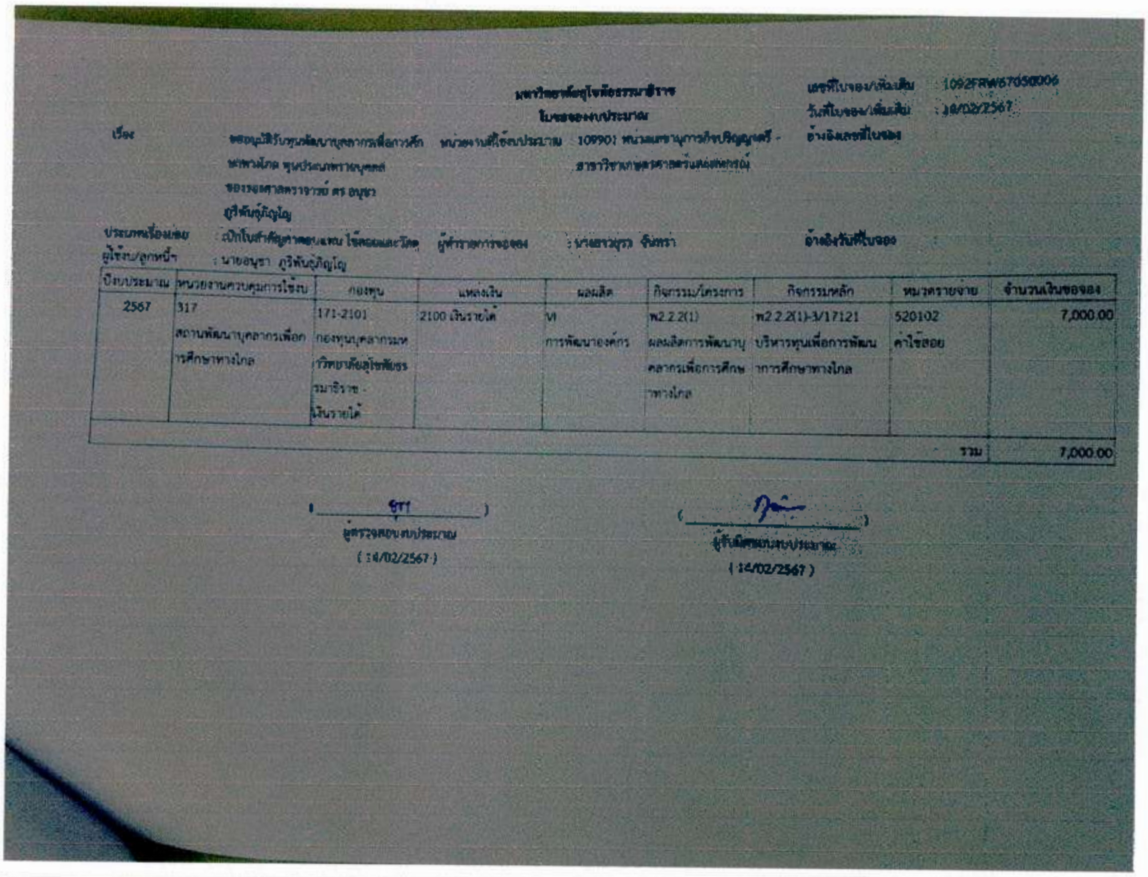
การประชุมหาดใหญ่วิชาการระดับชาติ
ครั้งที่ 15
The 15th Hatyai National and International Conference

รายละเอียดการประชุม
หลักการและเหตุผล

สถาบันอุดมศึกษาเป็นแหล่งเรียนรู้ที่สำคัญของประเทศ นอกจากมีหน้าที่ในการผลิตบัณฑิต สู่ตลาดแรงงานของประเทศแล้ว ยังมีหน้าที่พัฒนาและรวบรวมองค์ความรู้ที่ทันสมัยถ่ายทอดสู่สังคม โดยเฉพาะการผลิตผลงานวิจัยที่มีคุณภาพ เพื่อการใช้ประโยชน์และความก้าวหน้าทางวิชาการภายใต้จุดเน้นของนโยบายและยุทธศาสตร์ชาติ แผนการอุดมศึกษาพัฒนาบุคลากรวิจัยและนวัตกรรม และแผนพัฒนามหาวิทยาลัย ที่เน้น มหาวิทยาลัยจึงมีการบริหารจัดการเพื่อส่งเสริมและสนับสนุนคณาจารย์ นักวิจัย และบุคลากรให้มีสมรรถนะในการทำวิจัย [illegible] เพื่อให้ได้ผลงานวิจัยและงานสร้างสรรค์ที่มีคุณภาพ สามารถตอบสนองความต้องการของชุมชน สังคม และก่อให้เกิดประโยชน์แก่สาธารณชนได้ในวงกว้าง

มหาวิทยาลัยหาดใหญ่ เป็นหนึ่งในสถาบันการศึกษาระดับอุดมศึกษาเอกชน มีพันธกิจเพื่อพัฒนาศักยภาพมนุษย์ สังคม การศึกษา โดยคำนึงถึงการเปลี่ยนแปลงของประเทศและสังคมโลก ตามพันธกิจอุดมศึกษาด้วยการบริหารจัดการสมัยใหม่ โดยตระหนักถึงความสำคัญและการพัฒนาบุคลากรในการผลิตผลงานวิจัยอย่างต่อเนื่อง เพื่อสร้างองค์ความรู้อันจะนำไปสู่การพัฒนาและสร้างสรรค์สังคม ตลอดจนการจัดการเรียนการสอน การให้บริการทางวิชาการ เพื่อเป็นฐานความรู้และสังคมในการพัฒนาประเทศให้ก้าวทันต่อการเปลี่ยนแปลงของสังคมโลก ตลอดจนดำเนินการส่งเสริมสนับสนุนการเผยแพร่ผลงานวิจัยที่ดำเนินการแล้วเสร็จให้ได้มีโอกาสเผยแพร่ในแวดวงวิชาการและขยายองค์ความรู้สู่การนำไปใช้

รายงานฉบับสมบูรณ์การเข้าร่วมประชุมและนำเสนอผลงานวิจัย The 15th Hatyai International Conference. (รูปแบบ Online) ระหว่างวันที่ 17 พฤษภาคม 2567 รศ ดร. อนุชา ภูริพันธุ์ภิญโญ



มหาวิทยาลัยสุโขทัยธรรมาธิราช
ใบขอจองงบประมาณ

เลขที่ใบจอง/เพิ่มเติม : 1092FRW67050006
วันที่ใบจอง/เพิ่มเติม : 14/02/2567
อ้างอิงเลขที่ใบจอง

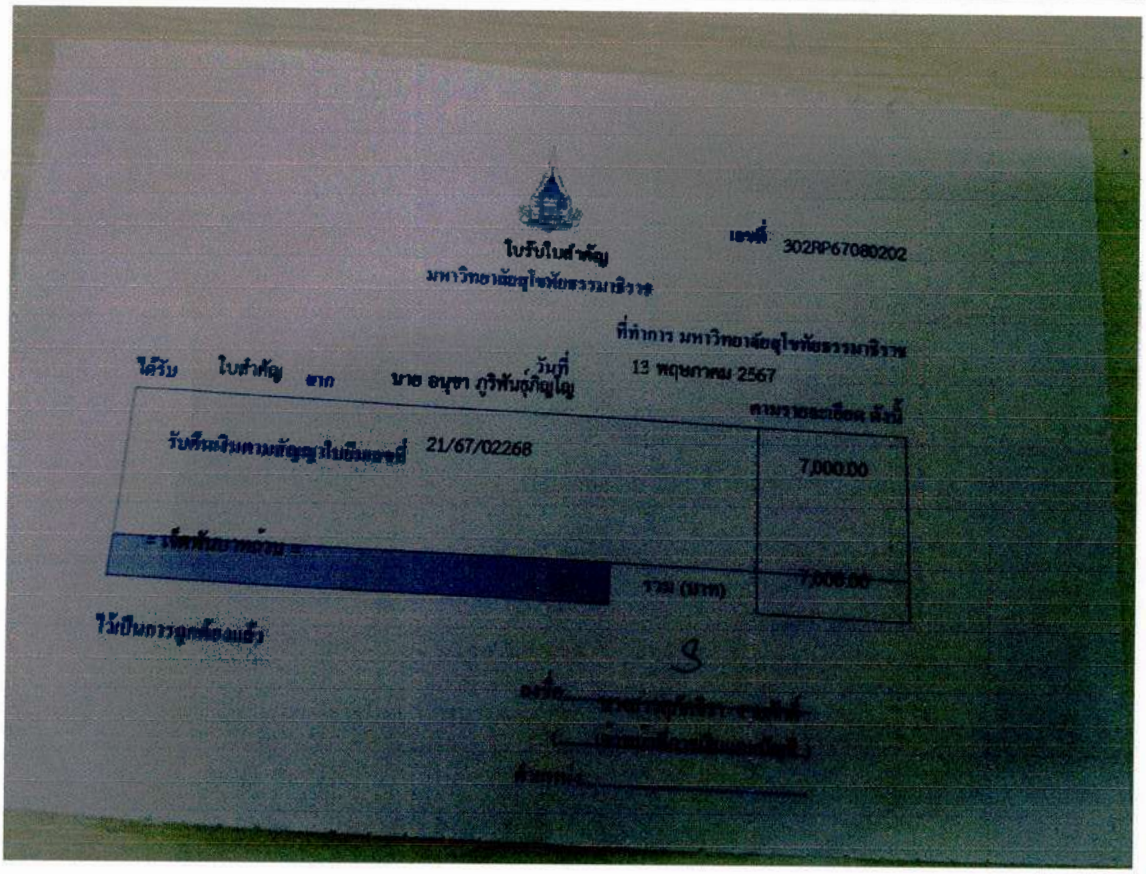
เรื่อง ขออนุมัติรับทุนพัฒนาบุคลากรเพื่อการศึกษาทางไกล ทุนประเภทต่างประเทศ ของรองศาสตราจารย์ ดร อนุชา ภูริพันธุ์ภิญโญ
หน่วยงานที่ใช้งบประมาณ : 10990? [illegible] - สาขาวิชา[illegible]

ประเภทเรื่องย่อย : เบิกใบสำคัญ[illegible] ใช้[illegible]
ผู้ทำรายการขอจอง : นางสาว[illegible] จันทรา
อ้างอิงวันที่ใบจอง :
ผู้ใช้งบ/ลูกหนี้ : นายอนุชา ภูริพันธุ์ภิญโญ

ปีงบประมาณ	หน่วยงานควบคุมการใช้งบ	กองทุน	แหล่งเงิน	ผลผลิต	กิจกรรม/โครงการ	กิจกรรมหลัก	หมวดรายจ่าย	จำนวนเงินขอจอง
2567	317 สถานพัฒนาบุคลากรเพื่อการศึกษาทางไกล	171-2101 กองทุนบุคลากรมหาวิทยาลัยสุโขทัยธรรมาธิราช - เงินรายได้	2100 เงินรายได้	VI การพัฒนาองค์กร	w2.2.2(1) ผลผลิตการพัฒนาบุคลากรเพื่อการศึกษาทางไกล	w2.2.2(1)-3/17121 บริหารทุนเพื่อการพัฒนาการศึกษาทางไกล	520102 ค่าใช้สอย	7,000.00
							รวม	7,000.00

([illegible])
ผู้ตรวจสอบงบประมาณ
(14/02/2567)

([illegible])
ผู้รับผิดชอบงบประมาณ
(14/02/2567)



ใบรับใบสำคัญ
มหาวิทยาลัยสุโขทัยธรรมาธิราช

เลขที่ 302RP67080202

ที่ทำการ มหาวิทยาลัยสุโขทัยธรรมาธิราช
วันที่ 13 พฤษภาคม 2567

ได้รับ ใบสำคัญ จาก นาย อนุชา ภูริพันธุ์ภิญโญ
ตามรายละเอียด ดังนี้

รับคืนเงินตามสัญญาใบยืมเลขที่ 21/67/02268	7,000.00
= เจ็ดพันบาทถ้วน = รวม (บาท)	7,000.00

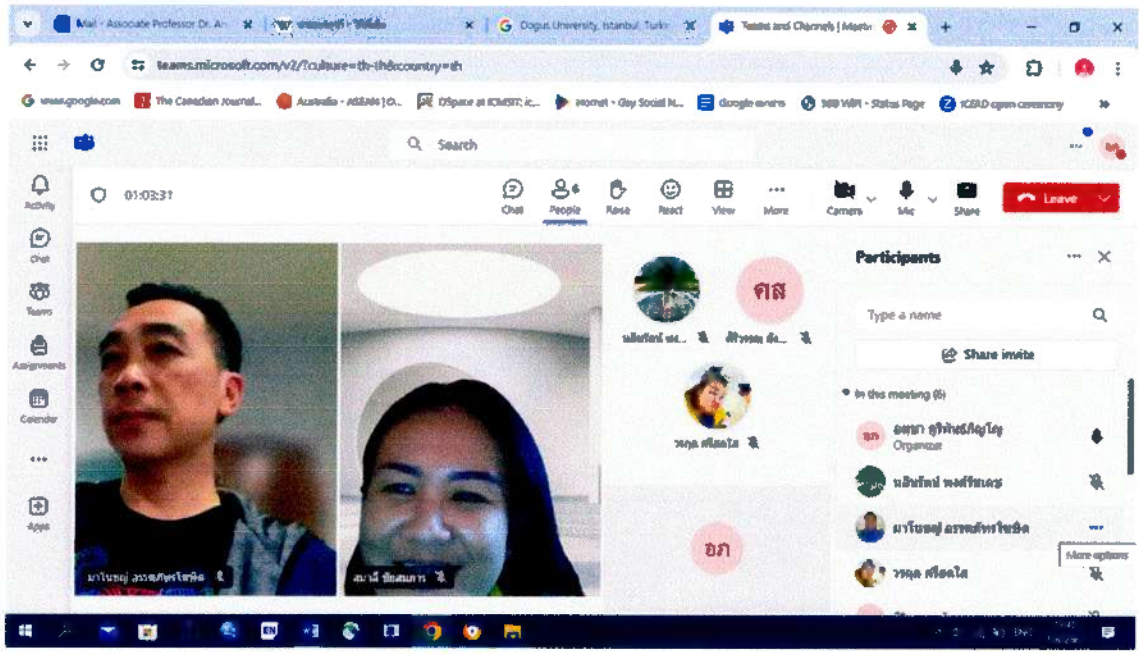
ไว้เป็นการถูกต้องแล้ว

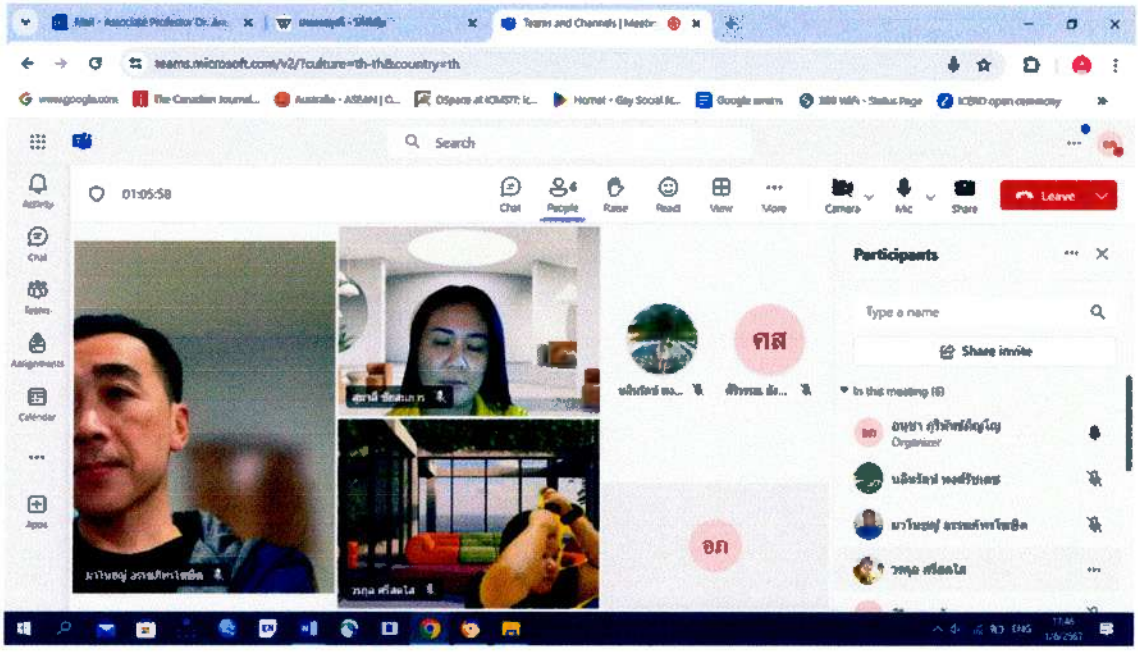
ลงชื่อ [illegible]
([illegible])
ตำแหน่ง

รายงานฉบับสมบูรณ์การเข้าร่วมประชุมและนำเสนอผลงานวิจัย The 15th Hatyai International Conference. (รูปแบบ Online) ระหว่างวันที่ 17 พฤษภาคม 2567 รศ ดร. อนุชา ภูริพันธุ์ภิญโญ

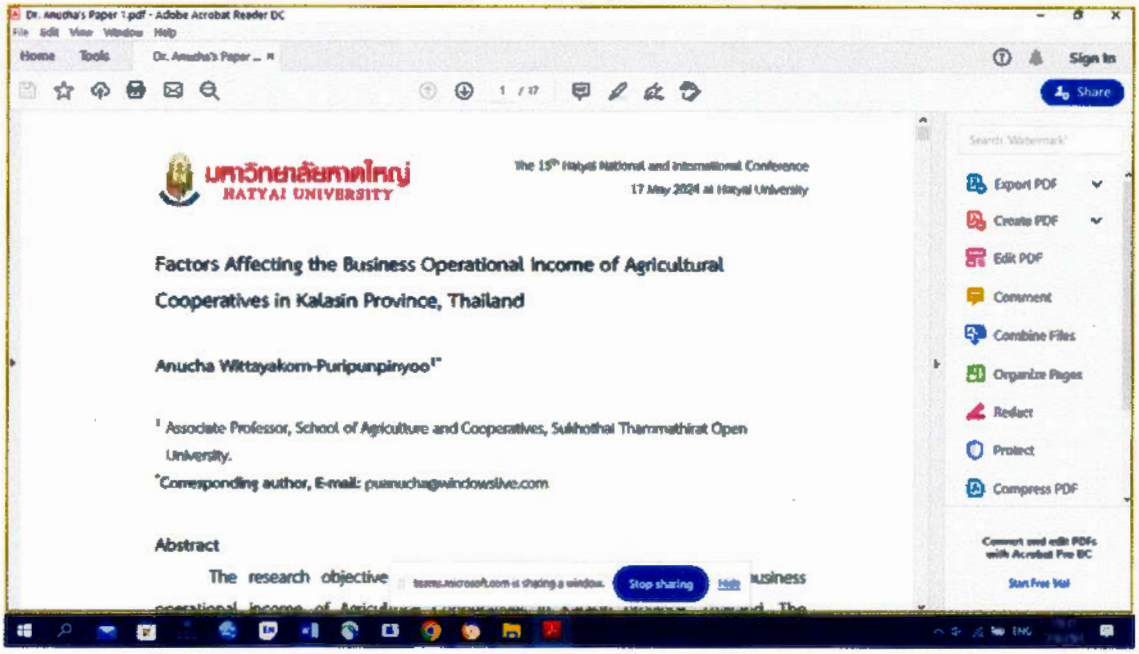
หลักฐานการเผยแพร่

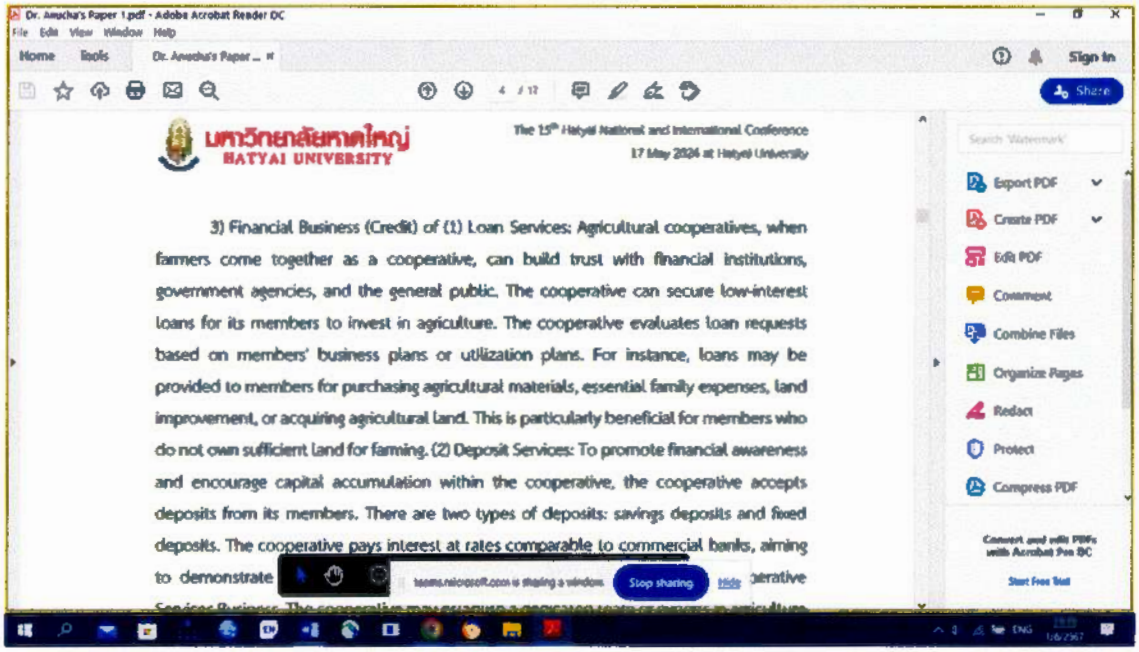
ภาพกิจกรรมการแลกเปลี่ยนเรียนรู้และการถอดบทเรียนจากงานวิจัย
เมื่อวันที่ 1 มิถุนายน 2567 ผ่านโปรแกรม Microsoft Team





รายงานฉบับสมบูรณ์การเข้าร่วมประชุมและนำเสนอผลงานวิจัย The 15th Hatyai International Conference. (รูปแบบ Online) ระหว่างวันที่ 17 พฤษภาคม 2567 รศ ดร. อนุชา ภูริพันธุ์ภิญโญ


Dr. Anucha's Paper 1.pdf - Adobe Acrobat Reader DC
File Edit View Window Help
Home Tools Dr. Anucha's Paper ...
Sign In
Share
มหาวิทยาลัยหาดใหญ่
HATYAI UNIVERSITY
The 15th Hatyai National and International Conference
17 May 2024 at Hatyai University
Factors Affecting the Business Operational Income of Agricultural Cooperatives in Kalasin Province, Thailand
Anucha Wittayakorn-Puripunpinyoo[1*]
[1] Associate Professor, School of Agriculture and Cooperatives, Sukhothai Thammathirat Open University.
*Corresponding author, E-mail: puanucha@windowslive.com
Abstract
The research objective
Stop sharing
Hide
Export PDF
Create PDF
Edit PDF
Comment
Combine Files
Organize Pages
Redact
Protect
Compress PDF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3) Financial Business (Credit) of (1) Loan Services: Agricultural cooperatives, when farmers come together as a cooperative, can build trust with financial institutions, government agencies, and the general public. The cooperative can secure low-interest loans for its members to invest in agriculture. The cooperative evaluates loan requests based on members' business plans or utilization plans. For instance, loans may be provided to members for purchasing agricultural materials, essential family expenses, land improvement, or acquiring agricultural land. This is particularly beneficial for members who do not own sufficient land for farming. (2) Deposit Services: To promote financial awareness and encourage capital accumulation within the cooperative, the cooperative accepts deposits from its members. There are two types of deposits: savings deposits and fixed deposits. The cooperative pays interest at rates comparable to commercial banks, aiming to demonstrate
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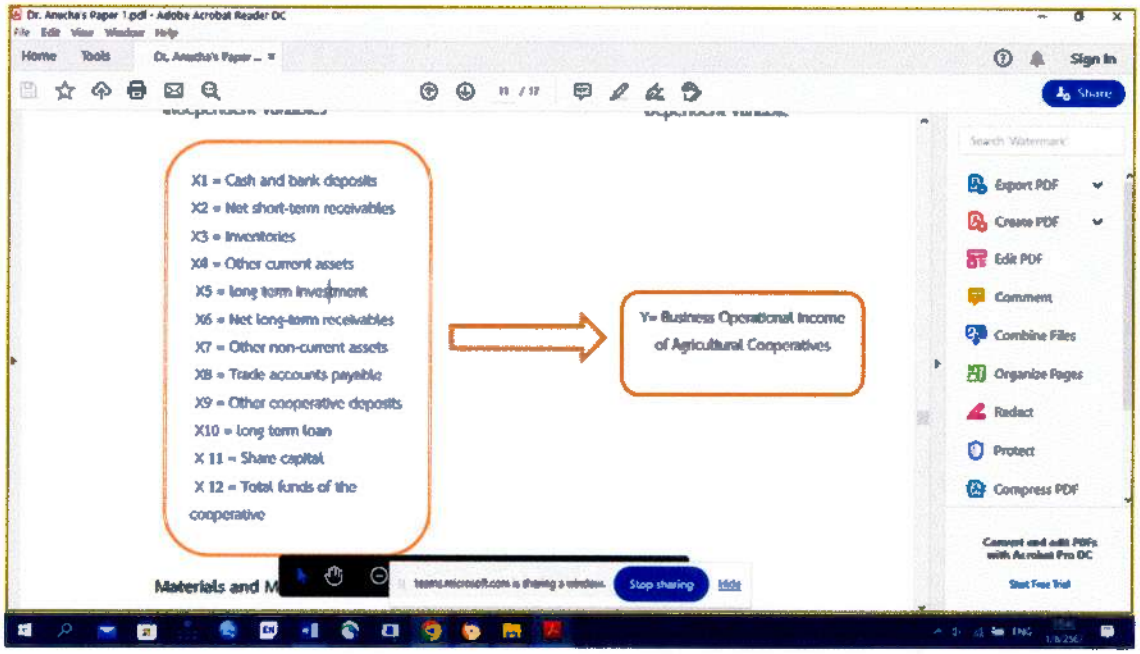

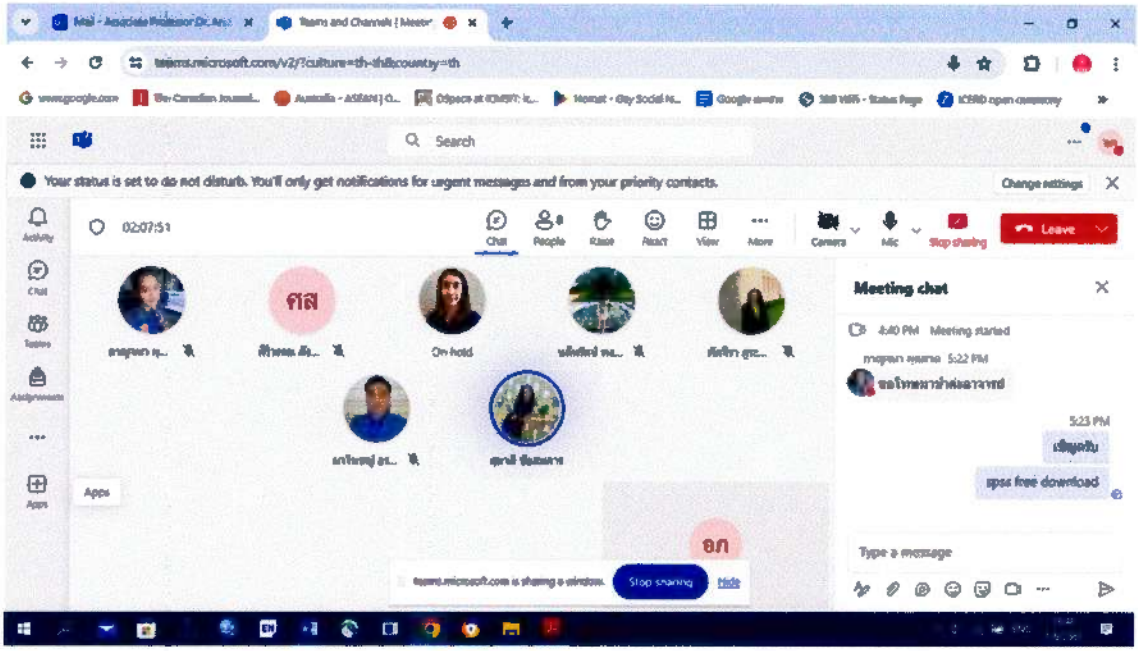

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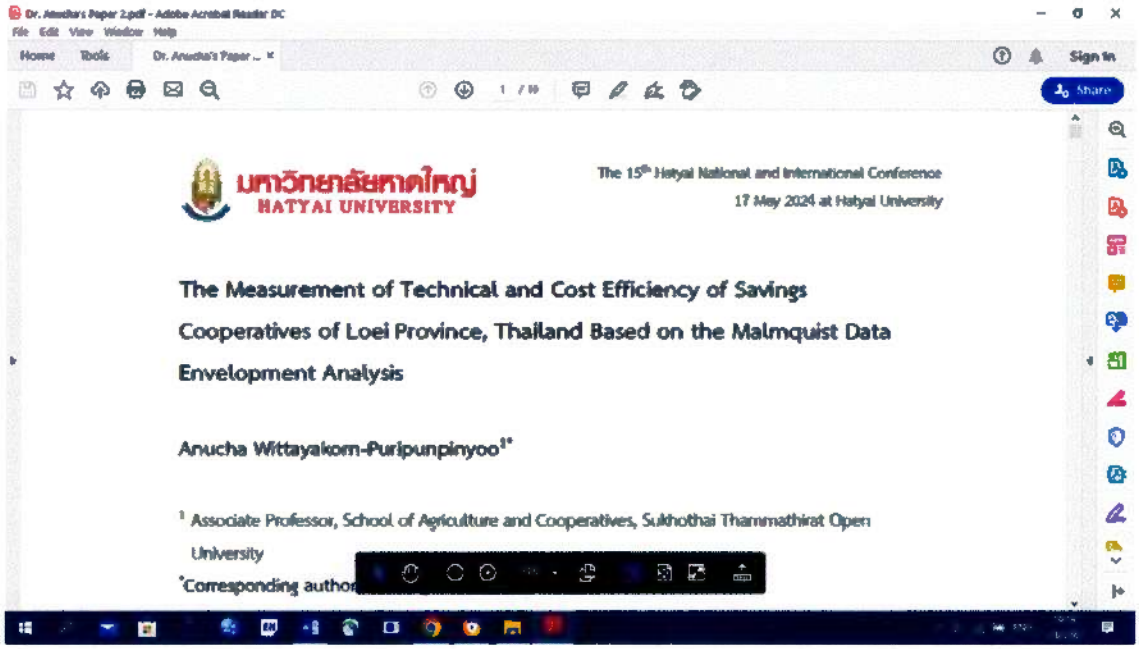

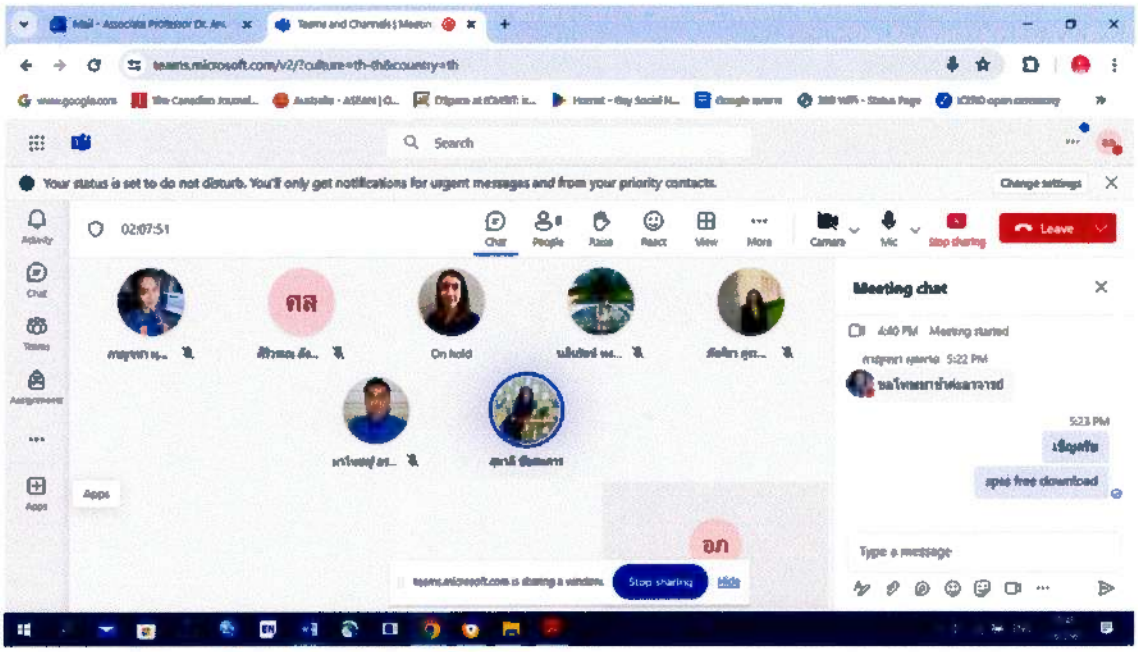

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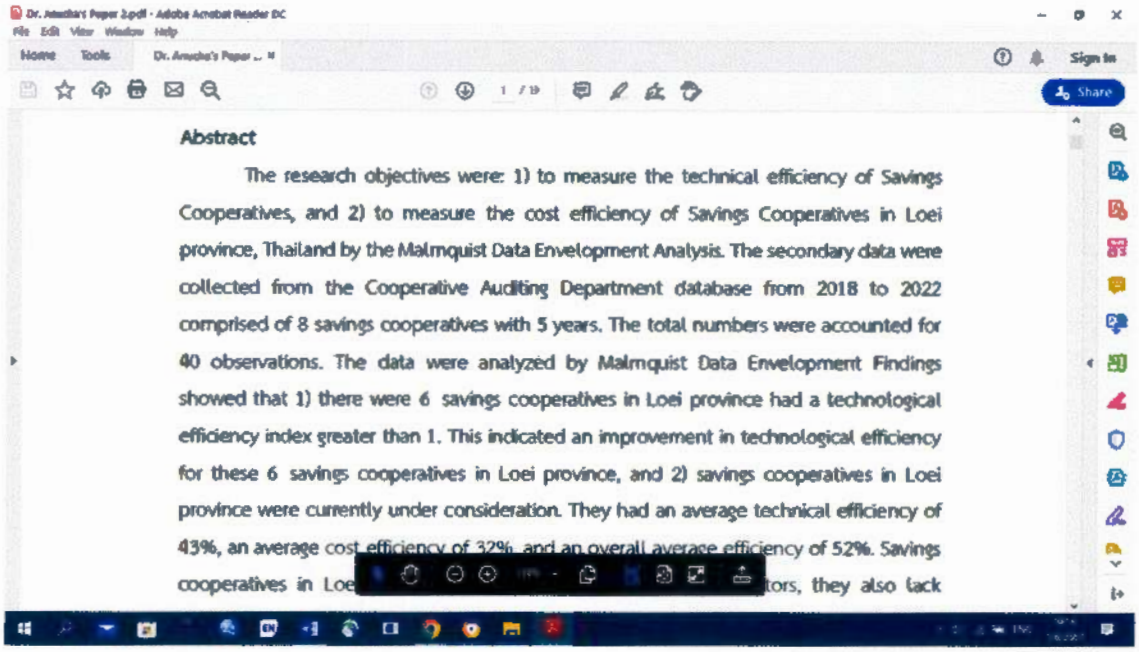
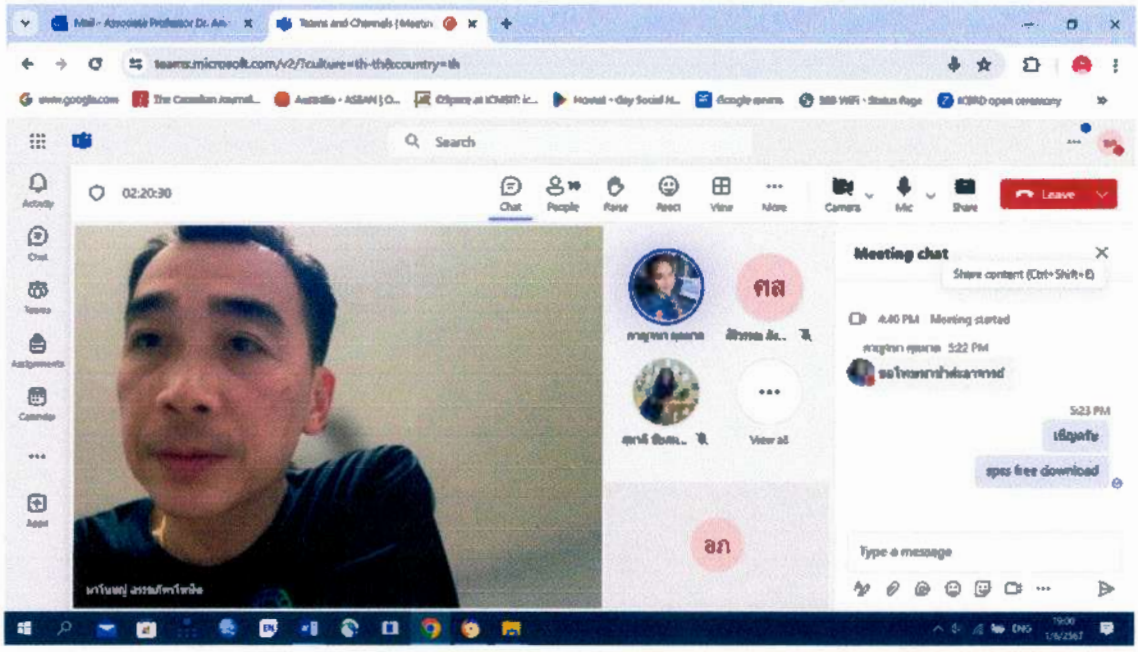

Abstract
The research objectives were: 1) to measure the technical efficiency of Savings Cooperatives, and 2) to measure the cost efficiency of Savings Cooperatives in Loei province, Thailand by the Malmquist Data Envelopment Analysis. The secondary data were collected from the Cooperative Auditing Department database from 2018 to 2022 comprised of 8 savings cooperatives with 5 years. The total numbers were accounted for 40 observations. The data were analyzed by Malmquist Data Envelopment Findings showed that 1) there were 6 savings cooperatives in Loei province had a technological efficiency index greater than 1. This indicated an improvement in technological efficiency for these 6 savings cooperatives in Loei province, and 2) savings cooperatives in Loei province were currently under consideration. They had an average technical efficiency of 43%, an average cost efficiency of 32%, and an overall average efficiency of 52%. Savings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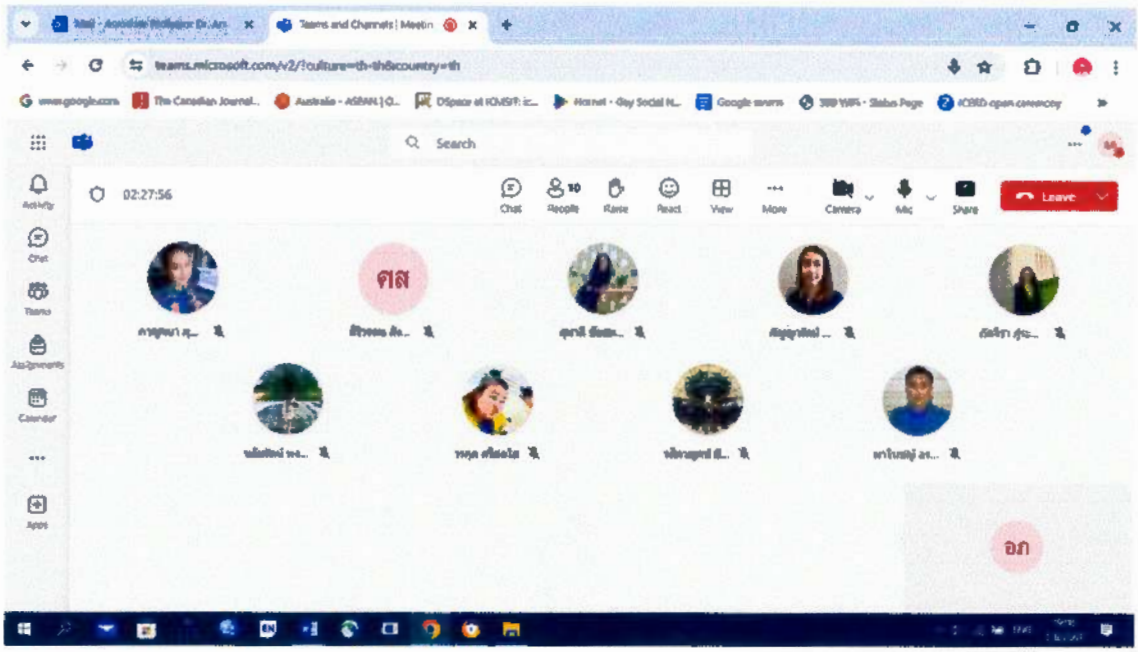

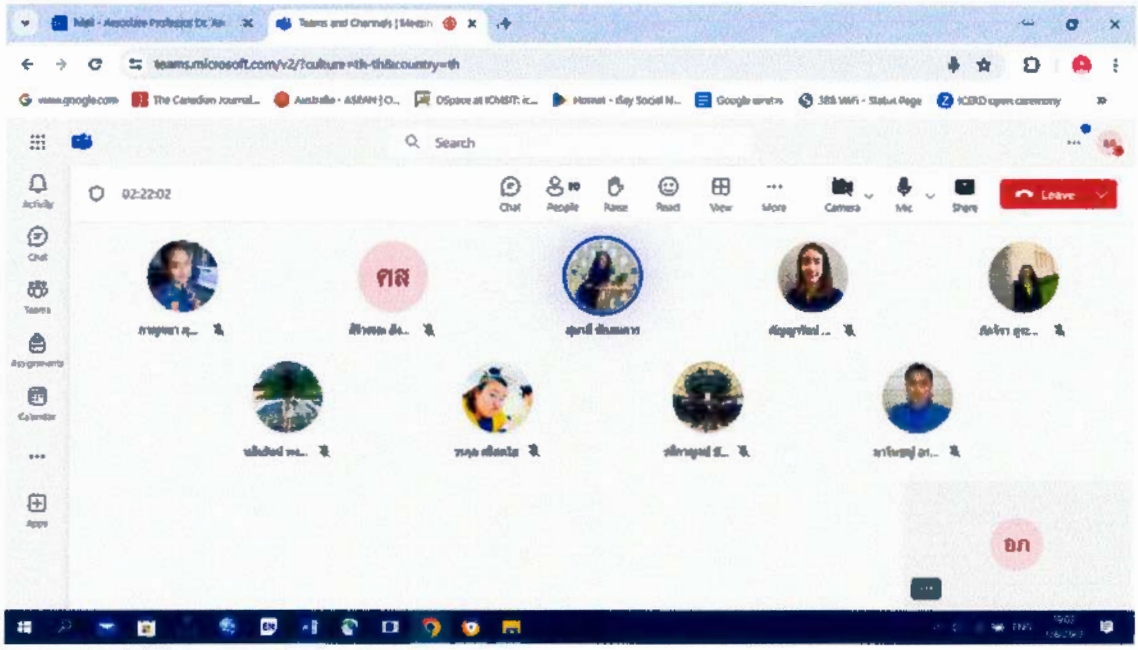

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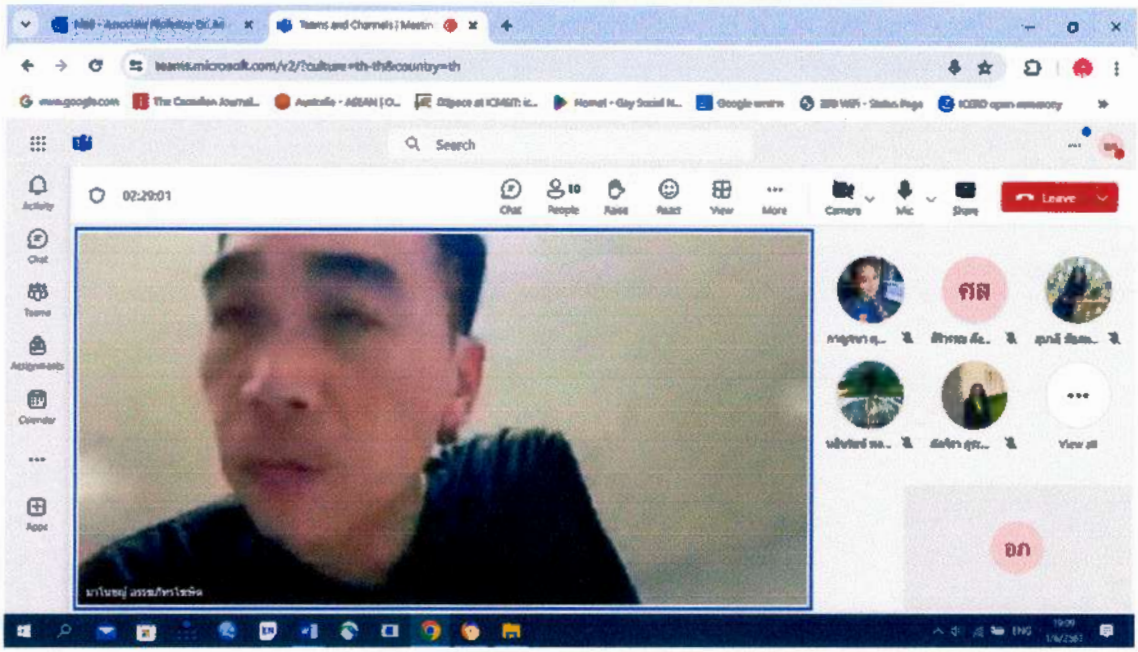

(7) ประโยชน์ที่ได้รับ

7.1 การแลกเปลี่ยนเรียนรู้จากการเข้าร่วมประชุมและการนำเสนอผลงานวิจัยในระดับนานาชาติ

7.2 การสร้างเครือข่ายทางวิชาการกับต่างประเทศ เช่น ประเทศมาเลเซีย ประเทศเวียดนาม ซาอุดิอาระเบีย เป็นต้น

(8) ข้อเสนอแนะ

มหาวิทยาลัยสโขทัยธรรมาธิราชควรสนับสนุนการเข้าร่วมประชุมวิชาการนานาชาติแก่บุคคลากรเพื่อเป็นเวทีในการนำเสนอผลงานวิจัยและการสร้างเครือข่านทางวิชาการในระดับนานาชาติ

หมายเหตุ 1. กรณีไปฝึกอบรม ดูงาน ประชุม/สัมมนา เป็นหมู่คณะโปรดระบุชื่อผู้ไปร่วมกิจกรรมดังกล่าวทั้งหมด และเสนอรายงานในชุดเดียวกัน

2. รายงานควรมีความยาวประมาณ 5 - 10 หน้า และถ้ามีรายงานต่างหากเพิ่มเติมก็ให้แนบไปด้วย ทั้งนี้ เพื่อที่ผู้สนใจซึ่งมิได้ไปฝึกอบรม ดูงาน ประชุม/สัมมนา จะสามารถหาความรู้จากเนื้อหาสาระดังกล่าวได้ตามสมควร

3. ให้ผู้ที่ได้รับทุนส่งรายงานการฝึกอบรม หรือดูงาน หรือประชุมทางวิชาการ จำนวน 1 ชุด