

学位論文の要旨 (論文の内容の要旨)
Summary of the Dissertation (Summary of Dissertation Contents)

氏 名 ARANDARAGE MAYURA PRASAD ARANDARA
Name

学 位 論 文

Dissertation

論 文 題 目

Dissertation Title

Analyzing the Economic Performance of Cooperative Banks in Sri Lanka

This dissertation seeks to provide novel perspectives on the operations of cooperative banks within developing economies, particularly in the face of the dynamic market and environmental conditions. It aims to address the existing research gap by thoroughly investigating the performance of cooperative banks in Sri Lanka, with a focus on recent developments. The study encompasses various aspects, beginning with an analysis of the productivity of cooperative banks amidst changing market dynamics and environmental factors, including the impact of the COVID-19 pandemic. Furthermore, it delves into the examination of branch performance disparities and the influence of branch managers on overall branch performance. Lastly, the dissertation scrutinizes the wage structure within cooperative banks, with specific attention to identifying and understanding any gender-based wage disparities and their underlying causes.

Although cooperative banks are not as widespread in Asia, they hold considerable importance in Sri Lanka, where more than 30% of the population relies on financial cooperatives. Among the various types of cooperative banks, Cooperative Rural Banks (CRBs) stand out as the most financially stable. These CRBs operate within Multi-purpose Cooperative Societies (MPCSs), which are comprehensive cooperative organizations encompassing multiple business entities. These entities include CRBs, retail shops, fuel stations, and communication centers, working together under the umbrella of MPCSs. CRBs operate on a small scale, typically consisting of four to five employees, including a branch manager. The branches are confined to specific territories defined by the MPCS. These Cooperative Rural Banks operate as membership-based financial institutions, catering to the credit requirements of the agricultural sector and small and medium enterprises, which conventional commercial banks often hesitate to serve. In the past decade, CRBs have faced competition from microfinance institutions. Additionally, they have had to adhere to a regulation imposed by the Central Bank, which aimed to provide assistance to individuals and businesses affected by the COVID-19 pandemic.

Chapter 2 of the dissertation introduces a novel study that addresses the limitations of previous research on cooperative bank performance. Existing literature in this field has predominantly utilized a non-parametric approach, focusing on a single performance measure and lacking productivity decompositions. In order to bridge this gap, the present study employs stochastic input distance function estimations, which offer the advantage of handling multiple outputs and enabling the decomposition of productivity in Sri Lankan cooperative banks. This study's innovation lies in its utilization of the input distance function approach with multiple outputs, allowing for a comprehensive analysis of cooperative bank productivity and an empirical

examination of the impact of government regulations related to the Covid-19 pandemic on their performance in emerging Asian economies.

The study's findings reveal a decline in technical efficiency (TE) and a substantial decrease in total factor productivity (TFP) within CRBs from 2016 to 2020. The decomposition analysis highlights scale change (SC) as the most significant and prominent contributing factor. This can be attributed to two main reasons. Firstly, the entry of private financial institutions into the market post-2010 led to a reduction in the scope of CRB operations as they attracted CRB customers. Secondly, the government's policy of interest and debt relief for a period of two to six months in early 2020 had a particularly adverse impact on CRB operations.

The overall variation in technological change (TC) in banking operations was minimal, indicating a lesser role played by technology. Throughout the entire sample period, technical efficiency (TEC) remained negative, with a notable impact observed from the middle of the sampling period. Increased operational expenses and a higher non-performing loan ratio (NPLR) were identified as the main contributing factors. These findings support some of the general recommendations, suggesting that government intervention in CRB operations should align more closely with market dynamics. Additionally, CRBs should focus on incorporating advanced technology and implementing comprehensive human resources development to enhance their performance and ensure efficient service delivery.

Chapter 3 of the dissertation presents the second study, which aims to investigate the factors influencing branch performance and the ability of the company to accurately evaluate the contributions of branch managers and provide them with suitable rewards. This study incorporates two key research elements to address these inquiries.

The first element focuses on the impact of managers on branch productivity, commonly referred to as the "manager effect" in the literature. It examines how the actions and capabilities of managers influence the overall productivity of a branch. The second element explores the reasons behind spatial variations in productivity, known as the "branch effect." It suggests that certain branch-specific, time-invariant factors contribute to disparities in productivity among branches. These spatial productivity differences can be attributed to two factors: agglomeration economies, which result from the concentration of economic activities in specific regions, and the self-selection of highly productive workers and firms in larger cities. In the context of CRB branches, each branch operates within a designated territory and is restricted from serving clients from other territories. Furthermore, branches predominantly hire workers from the local area and do not transfer employees to other branches, except for branch managers. These characteristics shape the unique dynamics and constraints within CRB branches. This specific research design is employed to investigate the influence of both the manager effect and branch effect on branch performance, using profit per worker and NPLR (Non-Performing Loan Ratio) as the key outcomes.

The primary objective of the study is to determine the variances of the manager effect and the branch effect. To accomplish this, a Mixed effect model is utilized, which directly estimates these variances. In this model, these effects are considered random variables rather than fixed parameters. Following the main estimation to obtain the individual manager effects and branch effects, the Best Linear Unbiased Estimator is applied. Additionally, the estimated manager effects are used in subsequent analyses to assess their impact on managers' salaries and the likelihood of being assigned to better-performing branches. The results highlight the significance of managerial skills, even in the face of considerable variations in local conditions across branches. According to the findings, a considerable portion of the variance in branch profit per worker (35%) and branch-level NPLR (45%) can be attributed to the impact of managers. It is noteworthy that branch-specific factors account for a larger percentage (69%) of the variation in branch profit per worker,

while a smaller percentage (41%) is attributed to these factors for NPLR. However, the study reveals no evidence indicating that branch managers are rewarded based on their individual contributions through salary increases. Instead, they are rewarded solely based on the overall performance of their branches. Nevertheless, managers who successfully enhance profit per worker are rewarded with better branch assignments. A one standard deviation improvement in manager effects would increase the probability of being assigned to the top quartile branches by 8.7%. On the other hand, managers who effectively reduce NPLR do not receive similar rewards, possibly because CRBs have become more profit-oriented in recent decades while monitoring NPLR primarily aims to comply with government regulations.

The third study in the dissertation, discussed in Chapter 4, aims to examine the existence of a gender pay disparity among employees in cooperative banks, identify the contributing factors, and uncover any discernible patterns. The study's key findings can be summarized as follows. Firstly, the research affirms the presence of a gender-based wage gap, even within an organization where women make up the majority of the workforce. Based on the raw data, there is a 6.7% difference in wages between genders in CRBs.

Further estimation results reveal that human capital variables can only account for 1.3% of this wage gap, whereas factors such as tenure and potential experience demonstrate significant effects. The job level also emerges as a noteworthy factor, explaining 1.9% of the gender wage gap. Additionally, the study finds that within different job levels, there is a significant wage gap, particularly at higher levels. The second finding of the study highlights the influence of the proportion of women in the workplace on the gender wage gap. It suggests that a higher representation of women in a given workplace tends to be associated with a smaller wage gap between genders.

備考 論文の要旨はA 4判用紙を使用し、4,000字以内とする。ただし、英文の場合は1,500語以内とする。

Remark: The summary of the dissertation should be written on A4-size pages and should not exceed 4,000 Japanese characters. When written in English, it should not exceed 1,500 words.