別紙４

報告番号	※　　第　　号

主　論　文　の　要　旨

論文題目　Productivity Convergence of Microfinance Institutions: The Role of Financial Performance and Inclusion

（小口金融機関の生産性の収束 - 金融業績と金融包摂の役割）

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論　文　内　容　の　要　旨

Microfinance Institutions (MFIs) are one of the most widely adopted forms of financial institutions to serve low-income individuals, especially those in the developing world. Generally, these institutions provide small loans (compared to traditional banks) to low-income borrowers and microenterprises that do not have access to formal banking systems. Yet, from the point of view of the MFI, they lend small-sized loans with high cost to risky borrowers without a guarantee of repayment. Despite these challenges, MFIs remain in the developing world by overcoming the main barriers they encounter.

Consequently, this study examined the performance of MFIs in two regions with distinct microfinance characteristics, namely Latin America and the Caribbean (LAC) and South Asia. This study evaluated performance using Malmquist Productivity Index (MPI) and productivity convergence using conditional beta convergence and sigma convergence. Furthermore, performance of MFIs is assessed on three main aspects, namely financial performance, financial inclusion by lending to microenterprises, and social performance. The study used data from the MIX database in World Bank's open database covering 2007-2018.

Based on the main objective of the study, the research questions of the thesis are as follows;

1. Is there a convergence in productivity change of MFIs in financial performance aspect?

1.1 What are the determinants of productivity convergence or divergence in financial performance aspect?

2. Is there a convergence in productivity change of MFIs in financial inclusion aspect?

2.1 What are the determinants of productivity convergence or divergence in financial inclusion aspect?

3. Is there a convergence in productivity change of MFIs in social performance aspect? (Only for the analysis in South Asia)

3.1 What are the determinants of productivity convergence or divergence in social performance aspect?

Chapter 4, examined the productivity changes and the productivity convergence of profit-oriented MFIs in LAC. Financial performance and financial inclusion by lending to microenterprises were the only two primary aspects considered in evaluating this region. MPI with its decomposition as technological change, technical efficiency change, scale efficiency and pure efficiency provides insightful results with determinants of productivity change. Applying conditional beta convergence reveals whether the lagging MFIs are growing faster than previously leading MFIs, in other words, catching up. The other measure of convergence is sigma convergence using standard deviation which provides information about the dispersion in standard deviation in productivity change.

The results indicated that the productivity change has been regressing in financial performance and inclusion. The main reason for the regressing of the productivity change in financial performance is both technological efficiency change and technical efficiency change and its determinants as scale and pure efficiency. Therefore, to increase the productivity change in the financial performance, it is necessary to improve the technology and innovations as well as better managerial practices and conduct activities on an optimal scale. On the other hand, the main determinant for the regress of the productivity change in the financial inclusion aspect is technical efficiency change and its determinants, scale, and pure efficiency change. Hence, better managerial practice and optimal scale should be the main focus to improve the productivity change in the financial inclusion aspect.

Furthermore, the findings of the productivity convergence revealed that there is convergence in the financial inclusion aspect (both conditional beta and sigma convergence). However, in financial performance aspect there is beta convergence and sigma divergence. Therefore, both MPI and convergence analyses shed light on the importance of technology, operating on an optimal scale, and improving managerial decisions to improve financial performance. Furthermore, improving financial inclusion also relies upon the right scale of activities and better managerial decisions.

Chapter 5 focused on the profit-oriented and not profit-oriented MFIs in South Asia using the same methodology as Chapter 4. However, another aspect of performance is considered as social performance. The findings of MPI revealed that there is a regress of productivity change in all three aspects. The study indicated that scale efficiency and technological change were the major determinants of productivity change decline among profit-oriented MFIs. Furthermore, conditional beta convergence revealed that there is overall beta convergence. On the other hand, the findings of sigma divergence in all the components confirmed that the disparities among leading and lagging MFIs are widening in financial performance.

The findings of financial inclusion through lending to microenterprises by profit-oriented MFIs revealed that there is an overall regress in MPI. The main determinants are technical efficiency change and its component, pure efficiency change. Furthermore, the convergence analysis revealed that there is an overall beta divergence mainly due to pure efficiency change. The findings for both MPI and convergence emphasized that profit-oriented MFIs should more focus on efficient managerial practices to improve the productivity change in lending to microenterprises in the region. Moreover, the social performance of profit-oriented MFIs revealed that there is also an overall regress of productivity change. The main determinants of the regress are technological and scale efficiency change. Moreover, the findings of the convergence analysis confirmed that there is evidence for conditional beta convergence; however, sigma divergence for all the components of MPI.

The findings of not profit-oriented MFIs revealed a similar outcome for productivity change. The main determinant for the productivity regress in terms of financial performance is technological change. According to the results of convergence, there is beta convergence for each component of MPI. Despite this, there is an overall sigma divergence. The productivity change and convergence can be improved through a more advanced use of technology in the financial performance of not profit-oriented MFIs in South Asia. In terms of the financial inclusion aspect, the results of the study indicated a decline in productivity. Pure efficiency change is the primary determinant. Based on the results of the convergence analysis, it has been determined that there is beta divergence for components other than technological change. To improve the productivity change in microenterprises lending, it is necessary to apply effective managerial practices and decisions, as was the case with the findings of financial inclusion for profit-oriented MFIs.

According to a third aspect of the study, the social performance of not profit-oriented MFIs revealed a higher productivity decline than the other two. This suggests that NGOs in South Asia do not gain productivity change gains by serving the poor and women borrowers. Technology and scale efficiency changes are the main causes of the regress. Moreover, there is

conditional beta convergence for all the components in MPI. However, there is sigma divergence except for technical efficiency and its components, scale and pure efficiency change.

On the basis of the three aspects of profit-oriented and not-profit-oriented MFIs in South Asia, it can be concluded that MFIs perform poorly in financial performance, inclusion, and social performance. Perform at an optimal level is one of the factors that can contribute to the increase in productivity change in both financial and social aspects. Application of technological enhancements and advance techniques in lending to microenterprises can contribute to improve the productivity change in lending to microenterprises. Moreover, effective management decisions are crucial for improving the productivity change gain in financial inclusion in profit-oriented and not profit-oriented MFIs. However, the attention of policymakers should be directed towards the growing gap of disparities between leading and lagging MFIs in the region.

Finally, chapter 6 discussed policy implications for both regions. It is recommended that profit-oriented MFIs in the LAC region improve their efficiency and financial sustainability by focusing primarily on the development of technology and innovations in lending. This can be achieved by using digital financing techniques to improve efficiency, quality, and monitoring of borrowers. It is also essential to share the technological advances and innovative lending practices of the best-performing MFIs with lagging profit-oriented MFIs in order to help them catch up with them. Moreover, improved managerial practices and performance at an optimal scale contribute significantly to improving beta convergence.

The recommendation for profit-oriented MFIs in South Asia is to invest in technological advancements and innovations to enhance the efficiency of their operations, particularly to improve their financial and social performance. Capital investments and government support may be required in order to implement productive technologies in the microfinance industry. The next policy implication is about lending to microenterprises. Profit-oriented MFIs have demonstrated the worst performance in this regard, even when compared with financial and social aspects. Technical efficiency change and its components are the major determinants of productivity change regress and productivity divergence. Consequently, there ought to be policies that encourage efficient performance through improving the labor productivity of loan officers in lending to microenterprises, implementing efficient techniques from best performing MFIs to reduce costs and improve transaction quality, etc.

The results of studies on not profit-oriented MFIs in South Asia also indicated that these organizations do not perform optimally with regard to financial performance, microenterprise lending, and even social performance. To ensure improved financial and social performance, it is necessary to adopt technological advances from best-practice MFIs in the region.

Improvements in technology enhance both productivity change and convergence of financial and social performance in not profit-oriented MFIs in South Asia. Similar to the policy recommendation for financial inclusion aspect of profit-oriented MFIs in South Asia, to improve lending to microenterprises by not profit-oriented MFIs, the efficiency in the institution's performances should be improved.