博　士　学　位　論　文

内容の要旨および審査結果の要旨

第２９号

２０２２年

東　京　国　際　大　学

はしがき

本号は、学位規則（昭和 28 年 4 月 1 日文部省令第 9 号）第 8 条による公表を目的とし、2022 年 8 月 30 日に本学において博士の学位を授与した者の論文内容の要旨および論文審査結果の要旨を収録したものである。

学位記番号に付した甲は、学位規則第 4 条第 1 項（いわゆる課程博士）によるものであり、乙は同条第 2 項（いわゆる論文博士）によるものである。

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氏名・(本籍地)	Hetti Arachchige Neil Saman Kumara (スリランカ)
学位記番号	甲第 55 号
学位の種類	博　士　(デジタル経営革新)
学位授与の日付	2022 年 8 月 30 日
学位授与の要件	学位規則第 5 条第 1 項該当
学位論文題目	Technical Analysis in State Owned Enterprises: A Stochastic Frontier Analysis for Indonesia and Sri Lanka (国営企業のテクニカル分析: インドネシアとスリランカの確率フロンティア分析)
論文審査委員	(主査) 准教授　Mitra, Rajarshi
論文審査委員	(副査) 准教授　Amponsah, Samuel
論文審査委員	(副査) 准教授　Handika, Rangga

Ⅰ．論文内容の要旨

Abstract

Based on the original model of production and technical inefficiency proposed by Aligner et al. (1977) and a framework developed by Battese and Coelli (1995), this study estimates a stochastic frontier production function for state owned entities in Indonesia for the period 2010-2014 and Sri Lanka for the period 2005-2020. In the case of Indonesian SOEs, technical progress and technical efficiencies are examined using panel data and cross-sectional data. A negative and significant technical progress for Indonesian SOEs is observed. The results confirm that there were technical efficiency improvements over the period 2010-2014. The mean technical efficiency for Indonesian manufacturing SOEs is 80%, which means that, on average, Indonesian SOEs in the sample are producing output about 20% below the potential level. Therefore, there is scope to increase output by 20% without increasing labor and capital. However, for Sri Lanka, technical progress and technical efficiency are calculated using panel data only. The technical efficiency for Sri Lankan SOEs is found to be 27%; therefore, there

is scope to increase output of Sri Lankan SOEs in the sample by about 73% without increasing labor and capital. The results further indicate that political stability in the country after 2009 along with the effects of reforms implemented during the reform period 2005-2010 had significantly positive effects on the Sri Lankan economy, including the performance of the SOEs. Reforms in isolation do not have significant positive effect on output of the Sri Lankan SOEs. In order for reforms to be effective, labor must be combined with capital; therefore, the Sri Lankan government should encourage SOEs to invest in capital in order to increase the workers` productivity.

Keywords: Indonesia, State Owned Enterprises, Sri Lanka, Technological Progress, Technical Efficiency.

JEL Classification Codes: L32, L38

Ⅱ．論文審査結果の要旨

審査対象者： 学籍番号 19170002 氏名 Hetti Arachchige Neil Saman Kumara
論文題目： Technical Analysis in State Owned Enterprises: A Stochastic Frontier Analysis for Indonesia and Sri Lanka
審査委員長 Mitra, Rajarshi
審査員 Amponsah, Samuel
審査員 Handika, Rangga

1. Overall Evaluation of Research

Although numerous studies have examined technical efficiency in State Owned Enterprises in developing economies, hardly any scholarly attempt has been made to examine technical efficiency in State Owned Enterprises in Sri Lanka and Indonesia. Mr. Saman Kumara’s overall contribution, in terms of originality, is satisfactory.

2. Academic Contributions of the Research

As I have highlighted in (1), this has most likely been the first scholarly attempt to investigate technical efficiency in State Owned Enterprises in Sri Lanka. Additionally, Mr. Kumara has examined technical efficiency in State Owned Enterprises in Indonesia. He has also included a separate chapter on SOE reforms in Sri Lanka. His dissertation, therefore, includes three chapters. For Sri Lanka, he made earnest efforts to collect data from the government offices; however, due to the COVID-19 pandemic, many of the SOEs did not respond with the information that he requested for. For this reason, a limitation of his study is the small sample size for Sri Lanka.

Future research direction: I hope that Mr. Kumara would be able to increase the sample size for Sri Lanka and continue with his empirical investigation as an extension of his Ph.D dissertation.

3. Appropriateness of research objective, theme, title/subtitle, etc.

Research objectives, title and sub-titles were revised and approved by the members of his dissertation committee.

4. Appropriateness, adequacy, and originality of awareness of current circumstances, identification of issues, establishment of problems, analysis method, resolution method, conclusion, etc.

As I have mentioned in (2), the major obstacle that Mr. Kumara faced during his empirical investigation was data collection. Information on State Owned Enterprises for Sri Lanka were not readily available. With the help of government officials, Mr. Kumara personally contacted the SOEs for data on key variables such as output, capital, and labor. Unfortunately, many of those SOEs did not respond, as a result of which, Mr. Kumara did the analysis (for Sri Lanka) with a small sample size. Fortunately, he faced no such obstacles in the case of Indonesia. Despite the small sample size, his empirical analysis for Sri Lanka was satisfactory.

Conclusion: The mean technical efficiency for Indonesia and Sri Lanka were found to be 80% and 27%, respectively; therefore, there is scope to increase output of Indonesian and Sri Lankan SOEs in the sample by about 20% and 73%, respectively, without increasing labor and capital. He concludes by adding that reforms in isolation will not

have any significant positive effect on output of Sri Lankan SOEs. Based on the results of his study, labor must be combined with capital; therefore, from a policy standpoint, the Sri Lankan government should encourage SOEs in the country to invest in capital in order to increase labor productivity.

5. Appropriateness of the dissertation structure/consistency and adequacy of the discussion/appropriateness of the conclusion, etc.

No major issues were found although periodic revisions were necessary. The structure of his dissertation and his presentations were satisfactory. Mr. Kumara made earnest efforts to address the issues that were raised during his proposal defense and during the final examination. He estimated multiple models, and his results were found to be robust.

6. Clarity/argument construction/appropriateness of textual expression, etc.

Mr. Kumara was successful in clarifying all the queries that members of his dissertation raised during his proposal defense and final examination.

7. Appropriateness of dissertation format, use of citations, indication of reference materials, etc.

All reference papers are cited in the dissertation. I checked for plagiarism in both Turnitin and iThenticate before the members of his dissertation committee signed and officially approved his research. No issue was found.

8. Final Examination & Results

The final examination was held on July 6, 2022. The student made a PowerPoint presentation. Questions were raised by the audience. The student answered some of those queries, and later clarified by providing written explanations. Mr. Kumara also estimated several models to check for robustness of his results, and revised his dissertation thoroughly. His analysis improved, and he passed the final examination.

以上

博士学位論文　内容の要旨および審査結果の要旨（第 29 号）2022 年

2022 年 10 月 27 日

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