

論文 / 著書情報
Article / Book Information

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論文要旨

THESIS SUMMARY

系・コース： 融合理工学 系
Department of Graduate major in 地球環境共創 コース
学生氏名： 平出 峻
Student's Name

申請学位 (専攻分野)： 博士 (工学)
Academic Degree Requested Doctor of
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要旨 (英文 800 語程度)

Thesis Summary (approx.800 English Words)

The United Nations lists 32 landlocked developing countries (LLDCs). LLDCs have difficulties transporting international seaborne cargo partly due to their geographical situation. The progress achieved on many fronts in LLDCs through projects by international donors. However, physical infrastructure development is still inadequate and continues to pose a significant obstacle to the ability of LLDCs to utilize their full trade potential. Besides, it remains unclear what attributes and procedures of the cross-border corridors should be improved for such countries to stimulate trade flow. Thus, this dissertation identifies what attributes of cross-border corridors should be considered for improvement when developing projects to boost international trade in landlocked developing countries by their governments or international donors.

First, this study investigates the efficiency of the document and border procedures in all countries, including LLDCs. In many countries, document and border procedures create trading barriers, thereby impairing economic growth. These can range from insufficient transshipment facilities to unsupportive institutional arrangements. However, it remains to be determined the efficiency of the document and border procedures in each country and how new reforms can affect these. The efficiency of the document and border procedures are defined as the trade volume and value per required cost, time, and documents in the trading procedures. The efficiencies were calculated through a data envelopment analysis with cross-sectional data from 2019 and a window analysis with panel data from 2014 to 2019. All countries were classified according to their document and border procedure strengths and weaknesses. This analysis identifies the change in its efficiencies before and after reforms. Many countries have taken reforms to improve their procedures by introducing electronic documentation systems, strengthening border infrastructure, and enhancing customs procedures. Its efficiencies were calculated through a window analysis with panel data from 2014 to 2019. The study found a positive change in export procedure efficiency after all three types of reforms were instituted in a country but a positive shift in the efficiency only after the introduction of electronic documentation.

Second, the author identifies the attributes of cross-border corridors that influence the seaborne trade cargo flow of LLDCs. It is because it is still being determined whether the influential attributes of corridors to such countries stimulate trade flow increases even though difficulties in transporting international cargo are often blamed for their slow economic growth. Empirical analysis with a fixed effects model was conducted using annual panel data from 2010 to 2015 related to cross-border corridors leading to 19 LLDCs. The attributes of each cross-border corridor were estimated using publicly available statistical data. The results revealed that attributes such as weighted mean applied tariff, road quality, and the economic levels of such countries are statistically significant. Estimated coefficients suggest that improvements in the attributes mentioned above will be associated with an increase in trade volume.

Third, this study assesses the cross-border corridors in east African countries, which has five LLDCs, from the users' perspective. It is for contributing to the literature by providing implications on how LLDCs can improve their international cargo transport. The assessment is conducted with the data from a questionnaire survey in the northern and central corridor in East Africa. According to the result, landlocked countries using the northern corridor, Ethiopia, South Sudan, and Uganda, consider important not only in cost and time but also in safety in the corridor procedure. All assessment attributes are almost equally important regarding the corridor users in Rwanda and Tanzania on the central corridor. In contrast, Burundi focuses on the safety of its cargo transport. Besides, the assessment of three types of procedures from the view of each user country is conducted. Regarding border crossing, each border post has different attributes, which are low-rated and considered important by the user. However, cost, time, and unexpected delay are significant attributes that should be improved for users. Regarding

transship at a seaport, Mombasa port on the northern corridor should also improve its required cost and time for its procedures and unexpected delay for the northern corridor user countries, including the landlocked countries. In contrast, reducing cost and time at Dar es Salaam port in Tanzania has better for the landlocked countries such as Rwanda and Burundi. The inland transships are also investigated and should be reduced cost, time, and unexpected delay of its procedure in most of the depots. Besides, the northern and central corridor should improve their transport procedures regarding cost, time, and safety.

The findings of this dissertation have essential implications for LLDCs seeking to expand their seaborne trade. Decision-makers in their governments or international donors are helped to find practical solutions to promote their trade by this dissertation.

備考：論文要旨は、和文 2000 字と英文 300 語を 1 部ずつ提出するか、もしくは英文 800 語を 1 部提出してください。

Note : Thesis Summary should be submitted in either a copy of 2000 Japanese Characters and 300 Words (English) or 1copy of 800 Words (English).

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