Education and natural resources in economic development: Thailand compared with Japan and Korea

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Abstract

In this study, we compare among Thailand, Japan and Korea in terms of their educational and economic developments. We hypothesize that Thailand’s slower economic progress has been due to its slower educational development induced by abundant land resource. Our regression analysis using pooled time-series data of these countries confirms the negative effect of land endowment on educational investment. Land endowment also has a negative effect on agricultural intensification and industrialization whereas the educational stock has a positive effect. These imply that Thailand failed to effectively mobilize resource rent in the vent-for-surplus development stage for preparing conditions of modern development.

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1. Introduction

In this paper, we attempt a comparative analysis of educational and economic developments in Thailand, Japan and the Republic of Korea (hereafter referred to as Korea) based on aggregate time-series data we prepared in order to identify the effect of natural resource endowments on modern economic growth.

Both Thailand and Japan had based their subsistence mainly on rice cultivation until modernization was imposed by western powers. Since the middle of the 19th century, they have shared some important characteristics: (a) both were opened to trade with western nations at around the same time; Thailand signed the Bowring Treaty with Great Britain in 1855 and Japan signed the first commercial treaty with the United States in 1858, (b) both have adopted the monarchy system, (c) both faced serious threats to their sovereignty from western powers in the 19th century but were able to maintain independence and avoided colonization, and (d) both began to promote modern education in the 1870s (Dhiravegin, 1981; Feeny, 1982, 1998; Ingram, 1955).

Unlike Japan and Thailand, Korea, which was also a predominantly rice-growing economy, had continued to close trade with western nations until its annexation by Japan in 1910. In spite of this geopolitical difference, Japan and Korea are similar with respect to their scarcity of natural resources. In contrast, Thailand has been regarded as a resource-abundant (particularly land-abundant) economy until recently. Therefore, the historical comparison of Thailand with Japan and Korea is expected to reveal what role natural resources might play in the long-term economic development. In particular, we are concerned with the process in which natural resource endowment influences investment in education that is considered vital for modern economic growth.

There have been several studies demonstrating that the abundant endowment of natural resources has a negative effect on economic development (Ascher, 1999; Birdsall, Pinckney, & Sabot, 2001; Gylfason, 2001; Sachs & Warner, 1995). However, these studies are based on inter-country cross section data, making it difficult to identify the process of how differences in natural resource scarcity may have resulted in different patterns of economic growth involving different institutional changes.

In this study, we try to overcome this disadvantage by using the long-term historical statistics since the late 19th century of Thailand and Japan, and the post-World War II statistics of Korea. We limit our analysis on Korea to the period after World War II because of the difficulty in preparing comparable data for the territory of the Republic of Korea before Korea was divided between North and South. In addition, we exclude from our analysis the data after 1995 for all the three countries in order to avoid a possible irregular effect caused by the so-called Asian financial crisis.

The aim of this study is to answer the question why Thailand lagged behind Japan and Korea in entering the epoch of “modern economic growth” characterized by sustained increases in real income per-capita in the sense of Simon Kuznets (1966). However, it is outside the realm of this study to ask why in recent three decades Thailand began to follow Korea in catching up with Japan in economic growth and industrialization as a part of “East Asian Miracle” as defined by World Bank (1993).

The rest of this paper is organized as follows. Section 2 postulates our basic hypotheses and explains the data used. Section 3 compares natural resource endowments and
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