Available online at www.sciencedirect.com
SCIENCE DIRECT
Japan and the World Economy
16 (2004) 55–80
Japan and the WORLD ECONOMY
www.elsevier.com/locate/econbase

Factors affecting colonial industrialization in the endowment view of settlement versus extraction

Yong Jin Kim*

Department of Economics, College of Arts and Science, Ajou University, San5 Wonchundong, Paldal-gu, Suwon 442-749, South Korea

Received 2 January 2003; received in revised form 10 January 2003; accepted 25 February 2003

Abstract

The paper presents a model to discover the factors affecting the colonial industrialization, and to explain the empirical finding of the 'reversal of fortune' of Acemoglu et al. [Q. J. Econ. 117 (2002) 1231], based on an extended version of the 'endowment theory'. Reversal of fortune implies that countries among the former European colonies that were less urbanized (relatively poor) in 1500 should be relatively rich today. The model is based on the Krugman's geography model. We additionally assume that technology transfers including establishment of institutions are possible only through the settlement of economic agents from metro to colony. The model yields the following implications. First, various legal systems differing in the level of the rule of law do not affect the metro agent's decision of settlement or extraction. Second, the less urbanized is the colony, the more likely metro farmers migrate into the colony, transferring metro technologies and institutions. This is consistent with the 'reversal of fortune'. Third, the more likely the colony will experience metro agents' migration (technology transfers) and the subsequent colonial industrialization with its lower mortality rate, with its higher availability of arable land, or with its smaller distance from the metro. Last, if the distance is large enough, it leads to a different equilibrium where subsidiaries of metro firms in the colony produce and supply all kinds of the manufactures goods to the colony in a self-sufficient fashion. Then, only the mortality rate and the availability of arable land matter, while the distance does not. This is more consistent with the case of former European colonies such as US, Canada, Australia, and others.

JEL classification: J61; O11; P51; R12

Keywords: Reversal of fortune; Endowment view; Colonial industrialization; Geography model

1. Introduction

Most developing countries have undergone colonial experiences. However, their levels of industrialization as well as of the development of institutions achieved during and after

* Tel.: +82-31-219-2744; fax: +82-31-219-1618.
E-mail address: yongkim@ajou.ac.kr (Y.J. Kim).

0922-1425/$ – see front matter
doi:10.1016/S0922-1425(03)00018-5

their colonial periods are widely diverse. Additionally, the levels of physical and human capital stocks at the end of the colonial period were also very different among these countries. Considering that initial levels of these capital stocks and of institutions including financial and educational systems significantly influence future economic growth path, what causes these differences among developing countries is a very important question.

However, few papers have attempted to explore the mechanism of colonial industrialization process that generates these wide diversities across developing countries with a formal model. In this context, this paper provides a theoretical framework to find out the factors determining the development of institutions, and thus colonial industrialization during and after the colonial periods, and to explain the 'reversal of fortune' of Acemoglu et al. (2002, henceforth AJR (2002)).

More specifically, this paper presents a model that helps answer the question what determines the metro agent's choice between 'settle down in the colony' or 'extract resources from the colony' in the context of the endowment view. If some of metro agents migrate into the colony, then they will initially establish their institutions in the colony, prompting technology transfers to the colony and subsequent colonial industrialization. These institutions that includes educational, financial institutions, legal systems, and others provide proper incentives for agents' productive activities through, for example, securing private property rights, enforcing contracts, and so on. However, if metro agents decide to extract resources from the colony, instead of settling down, then it will establish an authoritarian regime to extract resources, pushing the colony into a poverty trap. Even after the liberalization of these colonies, transplanted well functioning institutions or the authoritarian regimes sustain for a long period of time, exerting a significant impact on the future equilibrium paths of these countries.

The endowment view of Acemoglu et al. (2001, henceforth AJR (2001)) emphasizes the role of initial conditions in shaping institutions as follows.[1] These initial conditions include

[1] Before introducing the model, we will briefly describe two other established theories regarding the historical determinants of financial development specifically. These two theories are the law and finance view, and the politics and finance view in addition to the endowment view of financial development. The law and finance theory of La Porta et al. (1997, 1998) argues: the common law in UK evolved to protect private property rights against the crown, and this helps protect private property transactions, with positive impacts on financial development. In contrast, France and Germany did not have powerful parliaments to protect private property rights. Indeed, the codification of the French and German civil codes in the 19th century under Napoleon and Bismark strengthened the state dominance of the courts. Over time state dominance produced legal traditions that weigh more on the power of the state, more on protecting the politically connected owners of firms, and less on the individual investors' rights. The politics and finance view stresses that political factors influence the development of institutions. This view emphasizes that the group in power will shape policies and institutions to its own advantage. Thus, while the law may play a role, the politics and finance theory emphasizes that centralized/powerful/closed political systems are more likely to hinder financial development than diffuse/competitive/open political systems. For an up-to-date survey, refer to Johnson and Shleifer (2001), and Beck et al. (2001). In addition to this view, AJR (2002) argue from a broader view that there exist two competing theories to explain the wide differences in economic growth across countries. The geographic hypothesis attributes to geographic, climatic or ecological differences among countries, while the institutions hypothesis to the organization of a society, including securing private property rights, that provides incentives and opportunities for investment. The organization includes educational, financial and political institutions. For an up-to-date survey on this, refer to AJR (2002), where they argue that 'reversal of fortune' is mainly due to the institutions hypothesis. However, they empirically find that the establishment of these institutions critically hinges on the availability of arable land of the colony.