



# Kerala's Industrial Backwardness: A Case of Path Dependence in Industrialization?

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**Summary.** — The Indian State of Kerala presents a paradox of development, with its remarkable social achievements and relative industrial backwardness. This paper describes Kerala's industrial backwardness as due to a path-dependent process of industrialization. A policy decision in the 1930s—marked by a priority for investments in chemical-based industries and the identification of hydroelectricity as a potential basis for industrialization—continue to have implications for industrial growth in Kerala today. With the policy decision in the 1930s, industrial structure in Kerala came to be locked into a pattern that offered very little potential for interindustry interlinkages and industrial growth.

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*Key words* — Asia, India, Kerala, path dependence, industrialization

## 1. INTRODUCTION

This paper examines some problems of industrialization in the Indian State of Kerala. Located in the south-west corner of India, Kerala comprises a total land area of 39,000 sq km and has a population of more than 30 million. This State has attracted widespread and well-deserved international attention for its remarkable achievements in social spheres, particularly in the fields of land reform, health, and universal school education (see Ramachandran, 1996). With respect to life expectancy at birth (70.4 years for females in 1993–97), infant mortality rate (14 per 1,000 live births in 2000), decline in birth and death rates, and literacy rate (87.9% among females above the age of seven in 2001), Kerala is significantly ahead of the rest of India; Kerala is also ahead of China with respect to most of these indicators (Thomas, 2003a). In 1998–99, the median number of completed years of schooling for all persons above the age of six was 7.9 in Kerala; the corresponding figure for India was 4.0 (Chandrasekhar, Ramachandran, & Ramakumar, 2001, Table 3). It is a feature of Kerala's achievements that in Kerala, more than other Indian States, these achievements have cut across caste and gender barriers, and have been carried to regions across the State (Ramachandran,

1996). Nevertheless, for all these achievements, per capita domestic product and per capita manufacturing value added in Kerala are substantially lower than the corresponding figures for India. In 1996, per capita domestic product at constant (1987) prices was US\$314 for Kerala compared to US\$380 for India and US\$750 for China. In the same year, per capita manufacturing value added at constant (1987) prices was US\$46 for Kerala compared to US\$75 for India and US\$255 for China (Thomas, 2003a). Industrialization in Kerala, in other words, is certainly far from being commensurate with the socioeconomic achievements for which the State is so justly famous.

There are clearly two points of view with respect to Kerala's industrialization. According to the first line of argument, Kerala's industrial

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backwardness is associated with the high incidence of labor unrest and the active role of trade union movement in the State (Albin, 1990; Oommen, 1979; Thampy, 1990). The second line of argument finds that Kerala's industrial slowdown is due to its weak industrial structure, which offers very little potential for interindustry interlinkages (Subrahmanian, 1990, 2003; Subrahmanian & Pillai, 1986; Thomas, 2003a). A question related to the second line of argument is that why and how did a weak industrial structure emerge and persist in Kerala; this question remains largely unanswered in the literature. The aim of this paper is to attempt to answer this question, using the analytical framework offered by the concept of path dependence.

The material for this paper is drawn greatly from official records and documents of the Department of Industries, Government of Kerala (which are currently available with the Kerala State Archives Department); proceedings of the legislative assemblies of Travancore and Kerala State; and various State and Central Government (Government of India) publications, including Five-Year Plan documents. This paper is also based on the information I gathered in the course of field visits to major industrial units in Kerala conducted between April 2001 and April 2003.

This paper is organized in eight sections. Section 2 discusses the concept of path dependence. Section 3 briefly examines the features of labor market and industrial sector in Kerala, and, thereby, sets the context for the study. Sections 4 and 5 trace the evolution of the industrial structure in Kerala: Section 4 reviews the period from the mid-1930s to 1950, and Section 5 reviews the post-1950 period. Section 6 deals with the problems to growth faced by Kerala's industrial sector. Section 7 discusses alternative paths for Kerala's industrialization, and Section 8 concludes the paper.

## 2. PATH DEPENDENCE: CONCEPTS AND DISCUSSION

There is a fairly large discussion in the literature on the issue of path dependence in economic changes. This discussion relates to how random events or "historical accidents" cause a (economic) system to be "locked in" to some specific path, and, thereby, determine the system's eventual outcome (Arthur, 1994; David, 1985).

The concept of path dependence has useful applications in explaining several economic phenomena. Path dependence explains how among competing technologies or products one particular technology or product emerges and persists as the dominant one. The continued use of QWERTY as the standard keyboard arrangement in typewriters (and computers) for over a century—although it is not necessarily the most efficient one—is often adduced in regard to path dependence (David, 1985). The path dependence theory is also helpful in understanding geographical aspects of economic development, including the question of how industrial activities tend to get concentrated in some particular locations, ahead of other potential locations.<sup>1</sup>

Path-dependent sequences appear in the presence of "increasing returns to scale," that is, when small perturbations to a system—instead of diminishing over time—reinforce themselves through "positive feedbacks" (Arthur, 1994, pp. 112–113). When do such self-reinforcing positive feedbacks arise? Positive feedbacks arise in the presence of large set-up or fixed costs or in the presence of learning effects. Positive feedbacks can also arise when there are advantages of "going along" with other economic agents while taking a decision or when self-reinforcing expectations exist (Arthur, 1994, pp. 112–113; David, 1985, 1997).

It is important to note the features of an economy (or any system) in the presence of positive feedbacks. First, the economy or the system settles down to one among the many possible equilibrium points, and not to any unique outcome. In the 1880s, there were several competing keyboard arrangements—QWERTY being just one among them—any one of which could have emerged as the standard arrangement in typewriter keyboards. Secondly, the equilibrium point that is finally reached need not be the "best" one—there is "potential inefficiency" in the equilibrium outcome (Arthur, 1994). There are examples of how among competing technologies, the inferior one gains early lead through fortuitous factors and, consequently, remains the market leader. Thirdly, in the presence of positive feedbacks, once a solution is reached, the system gets locked in to that solution; it is difficult to exit.<sup>2</sup> Early advantages to one technology make it very hard for a rival technology to break into the market. Fourthly, small, chance events early in the development of the system determine which equilibrium outcome is finally

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