Chapter 20

Dynamic Evaluation of Indian Commercial Banking Sector: A Bank-Level Growth Frontier Approach

Nitish Datta
University of Kalyani, India

ABSTRACT

The authors investigate the Indian commercial banking sector in the dynamic framework. Growth frontiers are derived with the help of Data Envelopment Analysis (DEA) to identify growth-efficient and growth-inefficient banks. The growth theories demand a steady-state growth path for each sector of the economy; on the other hand, the resource-based theory assumes firm-specific growth rates. The analysis shows dismal performance by domestic banks, both public sector and private; most of these domestic banks are growth-inefficient both in the short-run and in the long-run. The short-run as well as long-run findings strongly support the role of learning by doing as an engine to augment growth for all categories of banks. The analysis also exposes that the resource-based view of firm that generates rent generating competitive advantage ultimately drives both the managerial strategies and the performance of the Indian banking sector.

1. INTRODUCTION

Several strands of research in banking and financial institutions have conducted by researchers in the past to address the issues on the sector. The first strand investigates efficiency of the financial institutions and compares the average DMU with the best practice DMU on the frontier. Efficiency scores are used to highlight the causes of low profit, high cost and low revenue of an average institution compared to the best practiced institution and several studies on merger and acquisitions, ownership structure, managerial strategies, principal-agent problem, and the like have emerged. The second strand deals with risk of different types that tested not only the managerial behavior but also bank failure and bank-run by incorporating different degrees of diverse risk exposures with efficiency scores derived from frontiers appropriate for the investigation (Demyanyk & Hasan, 2010; and Berger & DeYoung, 1997).

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The third strand uses the New Empirical Industrial Organization (NEIO) methodology of Breshnahan, Panzar & Rosse to measure competition of the financial sector (Ceteroli, 1999) Bresnahan (1982) and Lau (1982) (Ucida & Tsutsui, 2005). Some researchers use these methodologies and linked the derived market power with efficiency, diversification/specialization of product/s to augment our knowledge base.

The discussions on efficiency and productivity should address the individual performance in a market economy. As the competitive environment is strengthened, the individual firms are to comply with the rules of the market in a better way. The most efficient and productive firm will satisfy the shareholders satisfaction by increasing profit. The underperformer will be penalized in different ways by the market forces; the chromic under performers may even face the threat to its survival in the free market economy. The production and cost frontiers are used to measure the efficiency of a firm at a time period. Total factor productivity growth refers to the change in productivity over time. The total factor productivity growth is an amalgamation of shift in production frontier and change in efficiency. The total factor productivity growth does not provide us efficient growth rates. The macro dynamic growth theories state that each economy has a steady state growth path. This growth path is the best growth rate of the economy at a point of time. The endogenous growth theories developed by Romer (1986, 1990), Lucas (1993) and others showed that endogenous factors cause the aggregate production function to maintain increasing marginal productivity. The main contributing factor is learning by doing, knowledge capital, and the like. Growth may be going on indefinitely because returns to capital goods do not diminish as economies develop. These theories incorporate R&D theories and imperfect competition into the growth framework. These models assume technological advance results from purposive R&D activities undertaken by firm, and this action is rewarded by some form of ex-post monopoly power. The study of diffusion of technology states that the follower economies imitate the advances in technology, since imitation is cheaper than innovation and thus leads to convergence in growth rates.

Several schools in industrial organization consider market structure as the principal determinant for the emergence of common behavioral pattern and similar performance for the firms of the concerned industry and consider firms within the industry are homogenous. The traditional school views market structure stable and exogenous (Bain, 1972; Caves, 1980; Poter, 1981), on the other hand the Schumpeterian school considers the market structure as dynamic and constantly evolving. The Schumpeterian school focuses on revolutionary innovations which makes rivals’ position obsolete and that ultimately changes market structure. Chicago school thinks the long run convergence of competitive pattern as the less successful firms imitate the strategies of most successful firms (Demsetz, 1973). It presumes as industries evolve imitation reduces performance gap between firms and eliminates the uneven composition of resource endowments and strategic gap between firms.

In contrast the proponents of resource based view think, firm characteristics and firm effects influences the variation in strategies and performance across industries and firms. The dominant firm effects force the firms to adopt heterogeneous strategies results in heterogeneity in performance caused by barriers to imitate and inability of the firms to change the resource endowments (Rumlet, 1991). The resource- based view of firm considers firm effects as the basis for sustainable rent generating competitive advantage that drives both strategies and performance. R&D efforts demonstrate the innovative competence of firms and that these efforts affect the firm performance (Hagedoon and Cloodt 2003). Finally the gradual change to the organization showed the diversification of action undertaken by the members in the negotiation process which lead to establishing the process of conducting knowledge