4 Efficiency Studies 2: Applications to China*

In recent years the issue of Chinese industrial performance has been brought to the attention of researchers both inside and outside China. As a result, the volume of literature on this issue has grown rapidly. The main reason for the earlier lack of research in this field was that Chinese statistics were rare for a long time. China had published statistics up to and including the year 1958 in the official publication *Ten Great Years* (State Statistical Bureau, 1974), but in 1960 a statistical blackout was imposed on the official statistical handbook. For the following twenty years comprehensive statistics could rarely be found. Even the FYP targets were not known. This situation persisted until 1979 when China opened her door to the world. In particular, the success of the rural reform and hence the assessment of agricultural performance drew researchers' and policymakers' attention to the evaluation of Chinese industrial performance.

How efficient is the Chinese industrial sector? How have firms responded to the economic reform programmes? Why do enterprises perform differently? These are some of the questions with which economists are concerned, and to which researchers are trying to find answers. Answers to these questions are vital for the formulation and implementation of China’s reform policies. Various methods, both classical and modern, are applied to studies in China. This chapter aims to present a review of the literature.

The Chinese industrial sector is usually said to consist of three groups, namely, the state, collective and private firms (see Figure 2.1 for a graphic illustration). These terms require explanation. The state firms are directly owned by the central and local governments. The collective firms are composed of the urban and rural collective firms. The urban collective firms are generally owned by local community groups or agencies of central and local governments. The rural collective firms are those owned by the townships, villages and rural communities. Finally, private firms are those owned by private entrepreneurs either as individuals or in partnerships in both the urban and rural areas. The rural collective and private firms, are also called the rural firms or more specifically the rural TVPs, that is, the

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rural township, village and private enterprises. Furthermore, the collective and private firms are often called non-state firms, in contrast to the state firms. In the following sections, efficiency studies of state industry are reviewed first. The work on the non-state sector is then surveyed. Subsequently, the findings of comparative studies of the state and non-state sectors are briefly summarized.

4.1 STUDIES OF STATE ENTERPRISES

Partial productivity analysis

In the Chinese economy the public sector has been dominant for decades. Many studies of efficiency, in particular early studies, have therefore focused on state enterprises. The earliest work, including Yue (1981), ED (1982), Field (1983) and Dirksen (1983). Yue and ED reported some figures which indicated a problem of low labour productivity. However, their work presented little empirical evidence.

In the published English language literature on China, Field (1983) was probably the first to deal directly with efficiency issues in Chinese state industry. Field (1983) examined the labour productivity performance of Chinese industry during the period 1952–81. By computing labour productivity indices of selected industrial branches, Field found evidence of slow productivity growth. He attributed this to such factors as the growth of infant industries and ineffective use of fixed capital assets. Field (1983) basically employed the so-called partial productivity method, which was discussed in detail in the preceding chapter. The same technique has also been widely used by scholars in China. Zhang (1990), for instance, examined labour productivity performance in various economic sectors, including the state industry. Zhang observed the growing trend of labour productivity in China’s agricultural, industrial and service sectors during the reform period. He found that, after 1985, labour productivity growth was particularly high in the industrial sector but stagnant in agriculture.

Total factor productivity analysis

Partial productivity ratios, as discussed in Chapter 3, fail to measure overall changes in productive efficiency. In order to measure changes in productive efficiency as such output must be related to the aggregate of corresponding inputs. This was done by the construction of total or multi-factor productivity indices. There are many empirical studies involving