Chapter 54
Research into the Path Evolution of Manufacturing in the Transitional Period in Mainland China

Tao Chen
SanJiang University, China, Nanjing Normal University, China, & Harbin Institute of Technology, China

Li Kang
SanJiang University, China, & Nanjing Normal University, China

Zhengfeng Ma
Nanjing Normal University, China

Zhiming Zhu
Hohai University, China

ABSTRACT

Manufacturing transition is an important part of industrial upgrading. At present, Chinese scholars study the problem of manufacturing chiefly from two perspectives: The first is to discuss the status quo of Chinese manufacturing from the perspective of industrial competitiveness, with countermeasures put forward against manufacturing upgrading. The second is to directly discuss the upgrading of manufacturing from the perspective of global value chain, with the following proposal put forward: Chinese manufacturing upgrading should stretch from the low end to both ends of value chain. In addition, a discussion is also made to the role of producer services in promoting manufacturing, and the role of governmental regulations in upgrading manufacturing. Although these two perspectives are rational, they have some defects: Both of them are based on the hypothesis that the institutional environment in which manufacturing lies is stationary, and manufacturing is considered and measured with systems as exogenous variables; so the impact of institutional environment on manufacturing upgrading is overlooked. Based on reviewing previous literature, this chapter analyzes and discusses the path evolution of manufacturing in the transitional period in mainland China.

DOI: 10.4018/978-1-4666-1945-6.ch054

1 INTRODUCTION

Industry, especially manufacturing, is the foundation and pillar of national economy. To most developed and developing countries, the leading role and fundamental function of manufacturing cannot be replaced by those of any other industrial sector. Since reform and opening-up began over 30 years ago, especially since China joined WTO in 2001, Chinese economy has been developing very rapidly, along with the continuous rise of its economic aggregate. This is closely linked with the swift development of manufacturing. So to speak, the development of manufacturing supports the "ridge" of Chinese economy. The same trend has also occurred to other countries. The governments of many Western countries have again brought forward their plan of "reindustrialization", i.e. paying attention to the important contribution of manufacturing to economic growth. Therefore, China cannot develop its economy without the development of manufacturing. Instead, we must pay attention to the role and function of manufacturing.

At present, Chinese manufacturing develops very rapidly. In the past ten years, both the volume and value of production of Chinese industry have always been growing rapidly. If calculated as per a constant price, the annual average growth of the total production value of Chinese manufacturing from 1995 to 2003 was 14.53%. By 2003, the total production value of manufacturing had reached about 12.27 trillion yuan. According to the calculation of UN Statistics Division and Industrial Development Organization, the annual average growth rate of Chinese manufacturing from 1998 to 2003 reached as high as 9.4%, while the same figure for developing countries in the same period was only 4.4.%. The value of the total export volume of Chinese manufactured goods divided by the number of employees in manufacturing rose from 1763.92 US dollars in 1995 to 9570.09 US dollars in 2004; the annual average growth rate from 1998 to 2001 was 18.30%. Since China joined WTO, the growth rate of export has been increasing more rapidly. The annual average growth rate from 2002 to 2004 reached 22.50% (Jin,et al., 2007). In 2008, the number of manufacturing enterprises in China was 396950, with an added value of 44135.836 billion yuan, total assets of 32340.308 billion yuan, and 77315.7 thousand employees. The number of manufacturing enterprises, total production value, total assets and number of employees in 2008 grew by 174.90%, 497.13%, 243.69% and 67.37% respectively over 2000. Among them, the total production value had the biggest growth rate: nearly 500% (Lin, 2010).

However, behind the rapid development of Chinese manufacturing exists a series of problems yet to be solved in an effective way.

First, the per capita added value of Chinese manufacturing is far lower than the world average. If calculated as per the constant price in 2000, the per capita added value of Chinese manufacturing in 2006 was 610 US dollars, lower than that of the developing regions in West Asia and Europe, Latin America and the Caribbean, merely equivalent to 13.5% of that of industrialized countries (Please refer to Table 1) (Li, et al., 2009).

Second, the regional distribution and industrial structure of Chinese manufacturing are seriously imbalanced. From the perspective of regional distribution, a huge gap exists in the distribution of manufacturing among eastern, central and western China. The total production value, added value, the total assets and number of employees of the manufacturing in eastern China are 73.68%, 68.85%, 70.14% and 72.50% respectively; the same figures in central China are 16.23%, 18.86%, 16.91% and 16.75% respectively; the same figures in western China are 10.10%, 12.29%, 12.95% and 10.75% respectively. From the perspective of industrial structure, the distribution of manufacturing is also imbalanced. Nearly 66% of the added value of manufacturing in 2008 was distributed in ten industrial sectors including ferrous metal smeltering, communication equipment and computer (Lin,