Summary of the Study

The Brazilian economy lived a wide-ranged structural transformation in the 1990s. The change in the macroeconomic sphere was quite dramatic. Brazil was under a hyperinflation of annual rate around 2,500 percent in 1993-94. The economic policy during the first half of the 1990s was unstable having an impeachment of the President, eight ministers of finance, and five governors of the central bank in five years. Because of the high uncertainty, access to foreign savings was barred and growth became volatile. The success of the Real Plan stabilization since July 1994 settled the inflation at one digit level. It boosted domestic demand and helped the recovery of the confidence in the Brazilian economy. Foreign direct investment inflow spurred principally into some deregulated sectors. The economic policy was guided consistently by one minister of finance and two central bank governors during the two consecutive mandates of President Fernando Henrique Cardoso (1995-2002), contributing to restoration of confidence in the Brazilian economy.

Reforms in the 1990s left two marked differences in productive dimension. One is the trade liberalization which substantially increased the share of imports and increased competitive pressure in the domestic market. Secondly, ownership structure has been internationalized to a large extent, as a result of acquisitions of local firms by multinational firms including privatizations. They were expected to lead to enhance the efficiency of the economy and growth promoting.

However, the macroeconomic performance since the inflation stabilization is not prone to criticism. Increased dependence on foreign finance after the liberalization amplified the volatility of the economic structure. The economy has been "shaken and stirred" from time to time by occasional external shocks and growth was never sustained. The mechanism of translating and amplifying external shocks into domestic economy is a topic of Chapter 1, which also serves as an introduction to the following chapters.

Further contrary to the expectation, the inflation stabilization and return of foreign investment did not result in recovery of economic growth and increase in employment.

We may set the following list of questions to solve this puzzle: How the changed environment has affected the competitive strategies of firms? Has the ownership change led to more efficient productive structure? Could liberalization solve the problem of inefficiency in public-owned infrastructure? Has the liberalization stimulated technology development of the industry?

Discussion in this book can be summarized as what follows.

In Chapter 1, based on the empirical result that the past economic growth performance was largely based on capital accumulation, the recent low growth record is attributed to low level of investment affected by the macroeconomic volatility. We interpret that the macroeconomic volatility derives from: (1) weak financial linkage to international market; and (2) shallow and conservative domestic financial market. Thus, negative external shocks are easily associated to interest rate hike and the question of vulnerability is structural because of the lack of ability to implement anti-cyclical fiscal policy. We still could find varied sectoral reactions against this macro-level observation. By looking at investment performance of each sectors, we found that investment performance was relatively high in sectors with slack demand such as recently privatized sectors and export-oriented sectors, but in general investment growth was slow and mergers and acquisitions became common practice as a mean of a protection from short-term fluctuation by increasing market power.

Chapter 2 addresses the question of how the competitiveness of the Brazilian industry and the pattern of competition strategy were affected by the liberalization in the 1990s. The study is based on the comparison of the current situation with what was observed in ten years ago. We found that sectoral performances can be grouped into four industrial categories – commodities; traditional goods; consumer durables; and technology diffusers (capital goods) – and this grouping has not been changed from ten years ago. Pattern of competitive strategies showed adaptation to liberalization. Industries in the commodity sector (steel, pulp & paper, concentrated orange juice, and petrochemicals, soy beans complex, and iron ore mining) stay highly competitive based on their highly productive natural advantage and further enhanced by vertical integration to logistics and energy sector and consolidation of leading firms through M&As (which is not yet conclusive in some industries). During the last ten years, the tendency to export low value-added products and to supply high value-added products has become more prevalent. In the traditional goods sector (food & drinks, furniture, textile & garment, shoes), we observed heterogeneous reactions. Larger firms in this sector became more competitive by modernizing production facility or intensifying exploration of low cost labor force in the Northeastern region. The consumer durable goods sector benefited from boosted domestic and regional (Mercosur) demand but at the same time competition intensified by entry of new players. Firms in the sector showed high ability of adjustment by modernization of production system including installation of new facilities and implementation of global sourcing. The technological diffuser (machinery, telecommunication equipments) sector suffered worst consequences from liberalization due to fragile technological base and deficient production system, previously created by strong government support.

Chapter 3 investigates the role played by M&A transactions in the change of concentration levels in Brazil from 1996 to 2000. Using information from Thomson Financial Securities Data and from the Annual Industrial Survey of IBGE, it concludes that: (i) the period was marked by a small increase in concentration levels, (ii) different markets had different concentration trajectories. The dispersion levels of concentration changes are very high; (iii) there seems to be a slight participation of M&A in the increase of concentration levels. This participation seems to be greater when eight and twelve firm concentration ratios are considered than when four firm concentration ratio is taking into account, (iv) the increase in concentration does not seem to affect negatively efficiency outcomes.

Chapter 4 analyzed the impact of privatization and introduction of market mechanism into previously government-owned and controlled public infrastructure, for the case of electric power. After achieving significant success until the 1970s, the Brazilian electric power sector stalled due to financial problems. The government promoted a shift toward a private ownership model and tried to entrust the market with creating a stable and efficient energy supply. However, the energy crisis highlighted the difficulties in this transition. This paper points out that the uncertainty inherent in the market-based model increased information rent for the private companies and complicated the postprivatization expansion scenario. Privatization driven by macroeconomic problems should be carefully reexamined, especially for public utilities with strong natural monopoly characteristics, since markets tend to fail to supply the socially optimal supply, thus directly affecting people's lives.

Chapter 5 presents three cases of localized high technology-based industrialization: telecommunication equipment in Campinas (São Paulo), aircraft in São José dos Campos (São Paulo), and biotechnology in Belo Horizonte (Minas Gerais) after the liberalization. The former two cases are originated from mission-oriented national research centers and the latter emerged from spontaneous spin-off from a university with local business support institutions. The case of Campinas showed disconnected development because the past telecommunication equipment agglomeration was mostly taken over by foreign enterprises but academic knowledge pool in the university turned to be attraction for technology based multinationals being keen to local R&D. On the other hand, the aircraft industry in São José dos Campos developed as an extension of the past model by internationalizing the risk sharing partnerships. Such natural transition owes to the establishment of competitiveness in core technology as well as business model valuing technological partnership during the state-ownership period. In contrast to the two cases, the biotechnology industry in Belo Horizonte consists of a number of small firms. As a shown by the pioneering example of an insulin producer Biobrás, these firms should face constraints to be matures in the middle stage of the venture firm development due to the competition with much larger scale multinational firms and lack of financial resource for investment.

Our study provided some evidences to sustain that the Brazilian industry showed its ability to adjust to uncertainties created by macroeconomic volatility and institutional changes brought by liberalization. At the macro level, low GDP growth was attributable to timid increase in aggregated capital stock. However, noticeable changes occurred to the structure of productive asset while leading companies sought to increase their operational efficiencies.

First, capital goods were updated and there was a replacement of labor by machineries as well, especially in consumer durable goods and tradable traditional goods seeking to strengthen competitiveness in the midst of boosted demand and more competition at the same time. There was a geographical change in seek for cheaper labor and more generous tax incentives. These movements led to a slight increase in capital stock and higher productivity but employment was drastically reduced especially in traditional manufacturing centers.

Secondly, ownership structure was changed. Switching the entitlement does not increase the aggregate capital stock, but transferring the ownership to more efficient firm can enhance productivity of capital and eventually lead to more investment. Efficiency may be reduced, however, if an acquiring firm would abuse its enlarged market power exploiting a monopolistic rent. In the Brazilian case, there was a sign of productivity increase associated with market concentration, due to high contestability in the market. Such efficiency gains may have risen from the post-acquisition consolidation but a synergy effect for substantial creation of new investment is yet to be seen. In the case of privatization of electric power, such conservatism coupled with mismanaged market regulation failed to maintain minimal supply capacity in the eventual climate condition.

Thirdly, trade liberalization and ownership structure change so far have been challenging to technology intensive and technology diffuser sectors. Activity in these sectors had been promoted by the exclusive procurement power of the government and market reserve. Some companies with consolidated core technological capability have been revitalized by effective partnership with foreign companies and specialization to product in which they are most competitive. Interactions between science and industry and locally concentrated supports are found useful to amplify technological dynamics.