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Viability, Economic Transition and Reflection on Neoclassical Economics

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Justin Yifu Lin

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Summary

Many transition policies, based on neoclassical economics, failed in Eastern Europe, the former Soviet Union, and China. This paper argues that the failure is due to the viability assumption in neoclassical economics. Neoclassical economics implicitly assumes that a firm is expected to earn a socially acceptable profit in an open, competitive market as long as the firm has normal management. However, many firms in the socialist as well as transitional economies are not viable, that is, they will not be able to earn a socially acceptable profit in an open, competitive market even if they are under normal management because they are in sectors that are inconsistent with their economies' comparative advantages. Under the viability assumption, reform policies, based on neoclassical economics, focus on issues related to property rights, corporate governance, government interventions and other issues that may obstruct a firm's normal management. However, many of those issues are in fact endogenous to the firms' viability problem. Therefore, without addressing the firms' viability problem, those reforms fail to achieve their intended goals. Not only in the socialist and transition economies but also in many developing economies there exist many nonviable firms. This paper suggests that the viability assumption in neoclassical economics to be relaxed when analyzing issues in socialist, transition and developing economies.

1. Introduction

In the 12 years from 1978 to 1990, China's reforms and open door policy obtained remarkable achievements, with its GDP growing 9.0% annually and its trade volume growing at 15.4%. During this period, urban per capita income grew 5.9% annually, meanwhile that of rural areas grew at a spectacular rate of 9.9% annually (NBS, 2002: 17, 94,148). Living standards in China increased significantly and disparities between urban and rural areas decreased.. In the late 1980s and early 1990s, the international economics research community did not understand much about China's reforms and many economists were not confident about the approach of China's reform.¹ Most economists believed that a market economy should be based on private property rights, a feature that the Chinese economy apparently lacked at that time. China's state-owned firms (SOEs) were not privatized; a dual-track resource allocation system was prevalent with state planning still playing a very important role alongside markets in resource allocation. These economists thought that although China's economic transition was blessed with beneficial initial conditions such as high proportions of cheap rural labor, low social security subsidies, a large population of overseas Chinese, and a relatively decentralized economy that helped to achieve some short-term progress, the dual-track system would soon lead to efficiency loss, rent-seeking, and institutionalized state-opportunism (Balcerowicz, 1994; Woo, 1993; Sachs and Woo, 1994 and 1997; Qian and Xu, 1993.). Some economists even claimed that in spite of the initial success China's dual-track approach to transition would eventually led the economy to a disastrous collapse (Murphy, Schleifer, and Vishny, 1992; Sachs, Woo, and Yang, 2000).

At that time, most economists were optimistic about reforms in the former Soviet Union and Eastern Europe (FSUEE hereafter) due to the fact that the reforms in these countries followed policy recommendations based on the basic principles of neoclassical economics. The most representative of these policies was the „shock therapy” implemented in Poland, the Czech Republic, and Russia, which consisted of three main components: price liberalization, rapid privatization, and macroeconomic stabilization by removing fiscal deficits (Lipton and Sachs, 1990; Blanchard, Dornbusch, Krugman, Layard, and Summers, 1991; Boycko, Shleifer, and

¹ There were also economists who held China's reform in high regard. They were Jefferson and Rawski, 1995; McKinnon, 1994; MacMillan and Naughton, 1992; Naughton, 1995; Singh, 1991; Chen, 1992; Harrold, 1992; Perkins, 1992; and Murrell, 1991, 1992, for example. 15.0% annually in the period 1990-2002 and retail price index only increased 67.1% in the same period. Those countries that implemented shock therapy experienced serious inflation and economic decline Russia's inflation reached 8414% in 1993, and Ukraine's reached 10,155% in the same year.

Vishiny, 1995). These components are considered to be the basis of an efficient economic system in neoclassical economic theory.

Economists recommending the shock therapy also knew that it took time to make the transition from one economic system to another and that it was costly to cast aside previously vested interests. But they optimistically assumed that the national economies would grow after six months or a year following an initial downturn stemming from the implementation of shock therapy (Brada and King, 1991; Kornai, 1990; Lipton and Sachs, 1990; Wiles, 1995). According to their arguments, the FSUEE would outperform China soon, though the former had instituted their reforms much later, and China's difficulties would loom large due to inconsistencies inside the economic system brought about by incomplete, dual-track reforms.

More than ten years have passed since the predictions of many renowned economists were put forth in the early 1990s. China's GDP and trade continued to grow at 9.3% and

³ The cumulative output decline in countries in Central and Southeastern Europe and the Baltics reached 22.6% and in countries in the Commonwealth of Independent States reached 50.5%. In 2000, Russia's GDP was only 64 % of what it had been in 1990, while in 2000 the GDP of Poland, the best performing countries in FSUEE, increased only 44 %, compared to that in 1990. Meanwhile, the Gini coefficient of income per capita, a measurement of income disparity, increased in countries in Central and Southeastern Europe and the Baltics from 0.23 in 1987-90 to 0.33 in 1996-98 and in countries in the Commonwealth of Independent States from 0.28 to 0.46 (World Bank 2002). Overall, the countries that implemented shock therapy experienced great difficulties in their reforms, in contrast to the optimistic expectations of most economists. Poland's economic records are best among countries of FSUEE. However, Poland did not implement the shock therapy completely. Although prices in Poland were liberalized, most of its large SOEs have yet to be privatized (World Bank, 1996; Dabrowski, 2001).

In the 1990s, the Chinese economy did suffer from a myriad of problems as predicted by those economists who favored the shock therapy. For example, the SOE reforms initiated in the early 1980s have yet to be completed; inter-regional and urban-rural disparities have increased; and the financial system are weak. However, China's GDP and trade continued to grow at 9.3% and 15.0% annually in the period 1990-2002 and retail price index only increased 67.1% in the same period (NBS, 2003). Moreover, living standards improved rapidly, especially in the urban areas. Economic development in China not only promoted the welfare of the Chinese people, but

also contributed greatly to the world economy. During the East Asian Financial Crisis, the Chinese currency (RMB) did not depreciate, which played an important role in the quick recovery of the East Asian economies from the crisis.

Why then were most economists not optimistic about China's future performance in the early 1990s? Many economists, who participated in the FSUOE reforms, work at the frontiers of economic research and are considered masters of modern economics. Why couldn't they predict and explain the difficulties brought about by the shock therapy, and why, at the same time, were they pessimistic about China's approach to transition? As pointed out by Murrell (1995), Stiglitz (1999) and others, many economists did not fully understand the history or the mechanisms behind a planned economy, nor did they understand the essence of economic system transformation in the former socialist countries, the foundations of a market economy and the basics of an institutional reform process. However, I would argue that the failures of economists' predictions about the performance of economic transition in FSUOE and China are also due to the fact that the existing neoclassical economics has an inherent limitation in analyzing the problems in economic transition. The paper focuses on this limitation.

This paper is structured as follows: Part II defines the concept of viability and points out that neoclassical economics implicitly assumes that firms existing in the markets are viable and that most firms in traditional planned economies are nonviable due to their governments' adoption of a comparative advantage-defying development strategies. In Part III, I will explain

³ Regarding the inflation rates and GDP growth rates of the FSUOE economies after the economic transitions, see Lin, Justin Yifu, Fang Cai and Zhou Li, *China's Miracle (revised edition)*, Hong Kong: Chinese University Press, 2003, Tables 1.1 and 1.2.

why the policies designed according to the existing neoclassical economics not only cannot remedy the problems in both the FSUOE and Chinese economies, but also lead to results contrary to intended outcomes. Part IV shows that the viability problem is prevalent both in developing countries and countries in transition. It is thus necessary to treat the viability issue explicitly in analyzing economic problems in the transition and developing economies. Part V uses China's transition and SOE reform as an illustration to show why the transition from a traditional planned economy to a market economy lies in a successful resolution of firm viability problem. Part VI concludes the paper.

2. Neoclassical Economics, Viability Assumption and the Formation of Planned Economy

Theories are used to explain and predict real-world phenomena. If failing to do so, the theories must have some fundamental flaws and should be revised or abandoned (Friedman, 1953). The neoclassical economics theories have performed reasonably well in explaining what happens in the developed countries, but they have not been as successful in explaining what happens in transitional economies and developing countries.

Neoclassical economics has a well-known assumption of rationality: given all available choices to a decision maker, he/she will choose the one considered to be the best. However, there is another assumption—the „viability” assumption as I call it—that is assumed implicitly by neoclassical economists in their analyses. I define the term „viability” with respect to the expected profit of a firm in an open, competitive market. If a *normally managed* firm is expected to earn a socially acceptable normal profit in an open, competitive market, then the firm is viable. For a nonviable firm, its setting up or continuous operation would be possible only if the firm receives external subsidies or protections.⁴ Implicitly assuming that all firms existing in the markets are viable in their analyses, if a firm does not earn acceptable profits in an open, competitive market, economists will conclude that the firm must lack *normal management* and infer that the problems must stem from corporate governance, incentive mechanisms, property rights arrangement and other market interventions that impede the firm to have normal management. The problems in corporate governance, property right arrangements and so on did exist in socialist economies. Therefore, under the neoclassical framework, the success of state-owned enterprise (SOE) reform and socialist transition depends on the elimination of those factors that impede the firm’s normal management. The shock therapy is based on this theoretical foundation.

Since the inception of neoclassical economics, economists in developed countries have carried out most theoretical explorations. Their researches focus mainly on issues happened in developed countries. It is reasonable to assume in their research that firms are viable, since except for firms in a few minor sectors governments in the developed countries rarely provide subsidies and other types of supports to firms in the markets. If a firm with normal management is not expected to earn acceptable profits in the market, the firm will not be set up in the first place. If a nonviable firm is established due to misleading information or mistake of judgment, investors will withdraw their investments so that the firm will cease to

⁴ The term „viability” was formally introduced in Lin and Tan (1999). The concept had already been suggested and used in Lin, Cai, and Zhou (1994) as an analytical basis for the formulation of traditional planned economy. The most comprehensive analysis of this concept can be found in Lin (2003).

exist eventually. Therefore, firms that can survive in an open, competitive economy must be viable, i.e., they are expected to earn acceptable profits under normal management. Therefore, it is appropriate to have the implicit viability assumption in the neoclassical economics, when economists attempt to explain or predict phenomena in the developed countries.

However, as argued in Lin (2003), many firms in transitional economies and developing countries are not viable, i.e., they cannot earn acceptable profits in an open, competitive market even though their management are normal. The non-viability of a firm arises from the fact that the sector in which the firm operates, the products it produces, and the technology the firm uses in production are inconsistent with the comparative advantages determined by the factor endowment structure, namely the relative abundances of labor, capital, and natural resources in that particular economy.

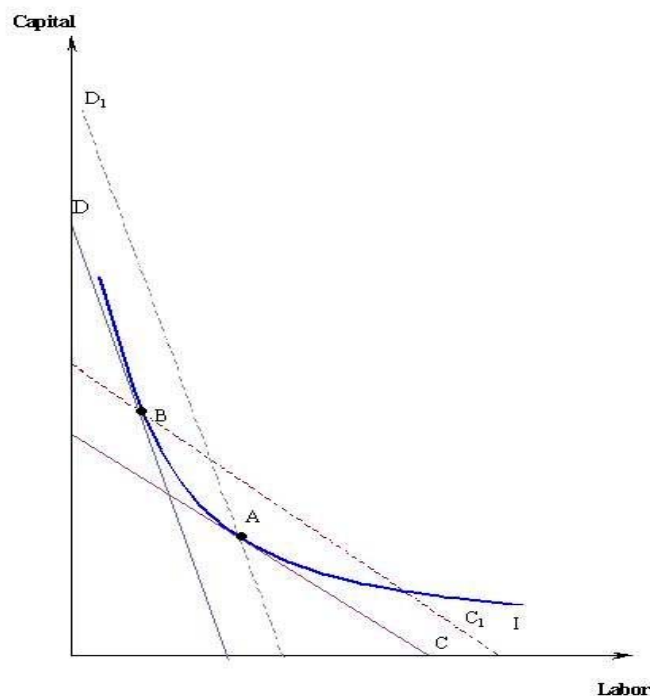


Figure 1: Relative Price of Production factors and Technique Choice

Figure 1 illustrates the idea of viability in a simple open, competitive market that produces only one product with two factors—capital and labor. Curve I is an isoquant. Each point on the isoquant represents a specific technology or combination of capital and labor required to produce a given amount of product.⁵ The technology represented by A is more labor intensive than that of B. In an open, competitive economy, the least-cost technology is the best. If C is the isocost line in the economy, the adoption of technology A costs the least, while the adoption of any other technology will make a firm incur losses in an open, competitive market. For example, if a firm adopts the technology represented by B, the firm is expected to incur a loss equivalent to the

distance from C to C1. Market competition will make firms that adopt technologies other than A nonviable. Therefore, in an open, competitive market with given relative prices of labor and capital, the viability of a firm depends on its choice of technology. Only the firm chooses the least-cost technology is viable.

Whether the isocost line looks like C or D depends on the economy's endowment structure. When labor is relatively abundant and capital is relatively scarce, the isocost line will be something like C rather than D. When capital becomes relatively abundant and labor relatively scarce, the isocost line will change to something like Line D in Figure 1. Therefore, the viability of a firm in an open, competitive market depends on whether its choice of technology is consistent with the comparative advantage of the economy's endowment structure.

The above conclusion can be extended to multi-product and multi-industry cases. That is, in an open, competitive market, whether or not a firm is viable depends on whether the firm's industry, product, and technology choices are consistent with the comparative advantages determined by the economy's endowment structure.⁶ If a firm's choices are not consistent with the above condition, the firm cannot earn acceptable profit in an open, competitive market even under normal management and its survival relies on government subsidies or/and protection.

A good example that illustrates the viability concept is agriculture in Japan. The majority of farms in Japanese agricultural sector are small and owned by owners/operators. There are consequently no problems of property rights and corporate governance.⁷ Japan, however, is a country endowed with limited land and has no comparative advantages in land-intensive agricultural products such as grain; it is also a high-wage labor country with no comparative advantages in labor-intensive agricultural products such as vegetables and fruits. Although Japan's agricultural sector is famous for its delicate, intensive cultivation, the survival of Japanese farms relies on high levels of government fiscal subsidies and tariff protections, without which most Japanese farms could not survive.⁸

Many SOEs in transitional economies face the same viability problem as do Japanese farms, due to the fact that these SOEs, especially the large SOEs, are established by

⁵ The curve can be considered as the envelope of all different kinds of technologies that can be used to produce the product. ⁶ For detailed discussions of firm's viability issue in a multi-good

and multi-sector context, see Lin (2003).⁷ The problem of corporate governance is due to the separation of ownership and control that leads to incentive incompatibility and information asymmetry between owners and managers. If the owner and manager of a firm is the same person, there will be no problems of incentive incompatibility, information asymmetry, and moral hazard.⁸ The price of rice in Japan is about 8 times that in the international market. Japan's deflation has lasted for more than a decade since 1991. The formation of the Free Trade Area of ASEAN plus three, including Japan, Korea, and China, stands to increase Japan's exports and FDI and will help Japan get out of its current deflation. China proposed the ASEAN Plus Three Free Trade Area in 2001, but Japan's response was quite cold due to Japan's needs to protect its agricultural sector.

governments with the aim of competing with developed countries in capital and technology-intensive sectors when their countries are still low-income, capital-scarce economies, thus running against the comparative advantages of their particular economies.

As a matter of fact, the traditional planning system in the socialist economies that existed before the current economic transition was formed to support and protect these non-viable heavy industrial firms that were not consistent with the economy's comparative advantages.⁹ The socialist countries, including Russia and China, were capital-scarce, backward, agricultural economies before their countries adopted the planning system. In a capital-scarce, agrarian, low-income country, the establishment of a firm in capital-intensive heavy industry must overcome numerous difficulties. First, the firm takes a long period of time to construct. Second, the key equipments and technologies necessary for the firm must be imported. Third, the initial investment is dauntingly large. At the same time in a low-income agrarian country, the economic surplus from each period of agricultural production is very small and scattered widely and thinly in the numerous rural farms. As a result, the economy has three distinct characteristics: First, the capital is relatively scarce due to the lack of economic surplus, making the market-determined interest rates extremely high. Second, the exportable goods are limited in varieties and quantities. As a result, foreign exchanges are scarce and market-determined exchange rates are high. Third, the mobilization of resources for investment in a project that requires large, lump-sum investment is difficult due to the fact that economic surplus is limited and scattered widely in the economy. The conflicts between the three characteristics of a low-income, agrarian country and the three characteristics of investment of a firm in capital-intensive heavy industry in the country require

the government to adopt special institutional arrangements to make the investment feasible.

Specifically, to make a long gestation investment project feasible in China and Russia, the government artificially depressed interest rates; to low the costs of imported equipments and technologies, the government distorted exchange rates by artificially overvaluing domestic currency; and to mobilize enough surplus for the large, lump-sum investment project, the government gave the firm monopoly in its output market and artificially depressed prices of all kinds of inputs—including wages—so that the firm could accumulate enough surplus for its own investment. As wage rates were suppressed, the government was required to provide workers with low-price living necessities. The distortions in interest rates, foreign exchange rates, wage rates, inputs and living-necessities' prices resulted in shortages of capitals, foreign exchanges, raw materials, and living necessities. To ensure that these scarce resources would be allocated to firms in the priority sectors, state planning and administrative allocation of resources according to the state plans were required. The above was the logic for the emergence of a traditional, planned system in the socialist economy.

Furthermore, if the firms were in the private's hands, the state could not ensure that the surpluses mobilized through the-above distortions would be invested in heavy industries according to the state's plans. Therefore, the firms were nationalized so that the state could directly control the rights to invest the surplus. In addition, even though the firms were owned by the states, the state could not overcome the problems of information asymmetry and incentive incompatibility. If managers of the firms have discretionary powers, moral hazards will ensue, resulting in the reduction of available surplus for investments. To prevent the

⁹ On the logic of formation of traditional planning system in socialist countries, see Lin, Cai, and Lin (2003).

erosion of surplus, the government deprived the managers any autonomy in input, output, and market decisions and in personnel appointments, wage settings, and other managerial discretions (Lin, Cai, and Li, 1997; Lin and Tan, 1999).

As a matter of fact, the various institutional arrangements, such as distortions in interest rates, foreign exchange rates, prices of raw materials, wage rates, and commodity prices, the replacement of the market mechanism with plan allocation, and the deprivation of managerial autonomy are all endogenous to the fact that the firms in the government's priority sectors are not viable in an open, competitive market (Lin, Cai, and Li, 2003). In the jargon of neoclassical

economics, these arrangements are the „second best.” They are required for the maximum mobilization of surplus in different sectors for investment in the priority sectors. With such arrangements, a backward agrarian country such as China could develop nuclear bombs and launch satellites within a short period of time. However, the resource allocation was poor due to the investments were given to nonviable firms. The incentive of workers and managers were low due to the manager’s lack of autonomy and disconnection of performances and rewards. As a result, the whole economy was very inefficient.¹⁰

Most distortions in the socialist planned economies were formed endogenously by the government for the purpose of facilitating the development of nonviable firms in sectors that are not consistent with the economy’s comparative advantages. Since many existing firms were not viable, it is not surprising that, the neoclassical economics with its implicit viability assumption cannot provide an adequate framework for understanding the phenomena of and addressing the problems in socialist and transitional economies. If the problem of non-viability is not eliminated, and if the government is unwilling or unable to let the nonviable firms go bankrupt, the elimination of distortions and improvement of the institutional arrangements according to the neoclassical economics at best will not achieve the intended effects and at worst will worsen the situation.

3. Neoclassical Economics and Policies of Economic Transition

The model of world in our mind will shape our understanding of the real world (North, 2002). Neoclassical economics, formulated in developed market economies, has proved that ineffective corporate governance, deficient property rights arrangement, and the government’s interventions in resource allocation to be harmful to economic efficiency. Economists, trained with neoclassical economics, tend to think that neoclassical economic theories are appropriate instruments in the analysis of problems in transitional economies when they see the familiar problems in corporate governance, property rights, and government interventions. They fail to see the endogeneity of these problems to the non-viability of firms in the government’s development strategy. Invited by the governments in FSUEE to design their transition policies, economists reached a remarkable consensus about the needs to eliminate the distortions and government intervention immediately (Summers, 1994, p. 252-3). The most prevalent reform policy advice according to the neoclassical economics is the

¹⁰ For efficiency indicators for China before the transition, see Lin, Cai, and Li (2002, ch. 3). For a detailed study on efficiency in the Former Soviet Union, see Desai (1990). ¹¹ Certainly, there were exceptions. For example, Murrell (1991) questioned the power of the neoclassical paradigm to explain the differences in the economic performance of market and centrally planned economies and the appropriateness of using neoclassical economics to underpin the reform of centrally planned economies.

„Washington Consensus”, which calls for strengthening fiscal discipline, increasing public investments to improve income distributions (most notably in previously ignored sectors with high rates of return), enlarging the tax base, unifying exchange rates, liberalizing trade, removing FDI barriers, privatizing SOEs, lifting regulations on market entry, and protecting private property rights (Williamson, 1997). The shock therapy proposed by economists for transitional economies in FSUEE is based on this Washington Consensus (Kolodko 2001). Therefore, we can understand why, in the 1990s, economists, with the neoclassical economics training, were more optimistic about reforms in the FSUEE that implemented shock therapies, and less so about the piecemeal, gradual, dual-track reforms approach taking place in China.

The neoclassical economics not only has an impact on economists working on issues related to developed, market economies, but it also influences economists working on issues related to other economies. For example, in the famous debate on socialism in the 1930s, economists, such as Oscar Lange, who believed that the socialist planned economy could increase allocation efficiency by simulating markets, and Hayek, who believed the socialist economy was doomed to fail due to informational problems, took the viability of firms in a socialist economy as an implicit precondition in their analyses.

Neoclassical economics also influences economists living in the socialist countries when they analyze the problems of their own economies. Kornai of Hungary is perhaps one of the most eminent economists specializing in socialist economic problems. One of his most important contributions is the concept of the „soft-budget constraint” (SBC) (Kornai, 1986). In many socialist countries, SOEs suffering from poor performance can ask for preferential treatment and subsidies, while private firms in market economies have no choice but to go bankrupt. Kornai proposed that SBC is the main reason for a lack of incentives to improve efficiency and for the prevalence of moral hazards in SOEs. He attributes the existence of SBC to the paternalism of socialist governments toward SOEs. Therefore, reform in property rights and the severance of

firm-state connections must be carried out in order to eliminate SBC and to promote firm efficiency. In Kornai's theoretical framework, SOEs are implicitly assumed to be viable. However, SBC in socialist economies emerges essentially from the viability problem of SOEs. In an open, competitive market, these firms would not be able to attract investments at the first place and, if they were invested due to misjudgment or other reasons, the investor would not continue to support their operations. To establish these nonviable firms, the socialist governments must take on the responsibilities of protecting and subsidizing them. Because of incentive incompatibility, the managers of SOEs have incentives to attribute their losses to insufficient government supports/protections, even though the losses arise from incompetent operations and managerial discretions. Because of information asymmetry, the governments cannot know what levels of protection and subsidy are adequate. Therefore, the government cannot resist the firms' requests for more support and the firms' budget constraints become soft (Lin and Tan 1999). Therefore, SBC of SOEs essentially results from the problem of non-viability rather than from the paternalism of socialist governments. Similarly, even in non-socialist countries, SBC will exist in the non-viable firms if the government is responsible for the establishment of these firms. The large *chaebols* in Korea are illustrative of this fact.

If the viability problem is the root of SBC, we can predict that if the viability problem is not solved, SBC will not be eliminated even though the socialist government is overthrown and all firms are privatized. In fact that is what happens in FSUEE. In FSUEE, the democratically elected governments replaced the socialist governments and shock therapies and privatization were implemented, but SBC still existed and in many cases the incentives of privatized firms' managers to bargain for more supports and protections became significantly higher than the incentives of SOE managers.¹² According to World Bank's studies, after full-scale privatization in FSUEE, the subsidies that firms received from governments did not decrease—in some cases they even increased (World Bank, 1996 and 2002).¹³ At the same time, taxation capacities were weakened significantly after the shock therapy. This, combined with high subsidies to firms, led to extremely large amounts of inflation in these countries.

It is not only that the shock therapy formulated according to the existing neoclassical economics did not work in FSUEE, but it also happened that many reform measures based on neoclassical economics or on the experiences of developed economies created similar problems in China.¹⁴ Take the reform of SOEs as an example:¹⁵ At the beginning of the reforms in the

early 1980s, it was believed that the root of SOE problems was in the lack of autonomy for SOE managers with the subsequent incentive problem stemming from no rewards given for performance. Therefore, the decentralization reforms were carried out to increase managerial autonomy and to allow SOEs to retain a certain share of profits for their own discretion. These measures were effective in pilot experiments, but became ineffective when they were implemented nationwide. Empirical studies found that the reform increased SOEs' productivity but the profitability declined (Lin, Cai, and Li 2001). Many scholars thought the dilemma arose from the arrangement of property rights because the firms were owned by the state but were operated by the managers, who were not the owners and did not have incentives to increase the returns to the equity owner, the state. Based on this diagnosis, the reform measures promoted, starting in the late 1980s, modern corporate governance in SOEs with the establishment of board of directors and supervision board so as to delineate clearly the owners' rights. A publicly listed company was considered to have the best corporate governance and property right arrangement, since the value of the firm would be

¹² Before the introduction of „shock therapy,” firms were state owned and managers were civil servants of the state. The subsidies they received from the government could not fall into their own pockets without the managers facing the possibility of corruption charges. However, after privatization, government subsidies could be channeled into the legal incomes of managers. Thus, the incentive to push for subsidies and preferential treatment rises higher and the problem of SBC becomes all the more serious. ¹³ According to empirical research, some firms after privatization increased their efficiency, but others did not. (Lavigne, 1995, p. 175; Djankov and Murrell, 2002). I believe the key lies in whether or not the firm is viable before privatization. If it is, then efficiency will increase after privatization; if it is not, such firms will experience a decrease in efficiency. After realizing that privatization did not help to solve SBC and improve firm efficiency, many economists realized the importance of improving corporate finance and market competition. As former Chief Economist of the European Bank and Vice President and Chief Economist of the World Bank, Nicolas Stern, commented, „good corporate governance of public firms and sound competition policy are at least as essential for recovery as privatization and liberalization.” (Stern 1996, p.8). Poland's former first deputy premier and Minister of Finance Kolodko (2000, ch. 4) holds the same opinion. However, the fact that many shareholding

companies in China did not show significant differences in their financial indicators from non-listed companies after five years of being listed shows that if the problem of viability goes unresolved, good corporate governance and sufficient market competition will not come about unless bankruptcy is permitted. (Lin and Tan, 1999; Lin, Cai, and Li, 2002).¹⁴ Since 1978, when China initiated its reforms, the two most significant changes, summarized by Deng Xiaoping as the two „unexpected results”, were the success of the household responsibility system (Lin 1992) and the remarkable growth of the township and village firms (Lin and Yang 2001). These reforms were not designed by reformers ex ante, but by peasants spontaneously in practice.¹⁵ Regarding academic debates and policy measures on SOE reform, see Lin, Cai, and Li (2001).

evaluated before it went public and after being listed the equity would be held by both the state and non-state investors. In addition to the board of directors, non-state shareholders would have incentives to monitor the company’s management and operations since they would care about the returns to their investments. Nevertheless, in reality, after a few years, the financial performance of the majority of listed companies did not differ from those of non-listed companies (Lin Yixiang, 1999). At the beginning, the poor performance of listed companies was attributed to the fact that only small, individual investors owned the non-state stock and these individual investors had little incentive to monitor the managers because the returns to the small individual stockholders’ efforts would be negligible. These small shareholders were thought to be interested in the short-term price changes in stocks, which led to a highly speculative stock market with high turnover rates and short holding periods.

In developed countries, institutional investors play an important role in equity markets. An institutional investor has the capacity to hold a substantial portion of a listed company’s shares and thus has higher incentive to monitor the invested company’s management than an individual investor. In addition, an institutional investor can hire professionals to analyze the listed companies’ reports and operations. If an institutional investor decides to hold the shares of a company, the institutional investor is likely to hold the share a long period of time. Therefore, Chinese researchers thought the introduction of institutional investors would stabilize China’s stock markets and investment funds were introduced in 1998. However, speculation in stock markets did not stop. Making things worse, many investment funds not only speculate in the stock market but also manipulated stock prices. How could this happen? The reason still lies in the problem of the non-viability of these listed companies. Without the ability to earn acceptable

profits in an open, competitive market, these companies cannot afford to distribute dividends to shareholders, which means that small individual shareholders can only profit through speculations on stock prices (Lin Yixiang 1999). Although institutional investors own large amounts of shares, they cannot gain by holding the stocks for a long time due to the non-viability and lack of profitability of those listed companies. With large amounts of money at their command and a small portion of stocks in circulation for each listed company,¹⁶ these institutional investors resort to manipulation of stock prices for their profits (Lin 2001, 2004).

In conclusion, policy reforms, based on the developed countries' experiences or the basic principles of neoclassical economics, have failed to achieve their intended goals because most firms in the transitional economies are not viable, whereas the firms to exist in the markets in developed countries are viable and the viability is an implicit assumption in neoclassical economics.

4. The Prevalence of Viability Problem and the Expansion of Neoclassical Framework

The problem of firms' viability and the resulting institutional arrangements not only appear in transitional economies but also exist widespread in developing countries. Upon seeing the decisive role of industrialization in promoting the economic and political powers of

¹⁶ For a listed company in China, only about 25 percent of the total stocks was issued to non-state investors and could be traded in the stock markets. The other 75 percents was still owned by the state and could not be traded in the stock market. Among the 1200 or so listed companies, only a few have distributed dividends to stockholders (Lin Yixiang, 1999).

developed countries, many leaders of developing countries that achieved independence after World War II attempted to develop advanced industrial sectors comparable to those in developed countries against their own comparative advantages,¹⁷ and they did so by intervening in factor prices, the financial system, international trade, and investment—without realizing that the industrial structures of developed nations were endogenously determined by their own particular factor endowment structures (Chenery, 1961; Krueger, 1992). With such efforts, the LDCs were able to establish firms in the advanced sectors. However, those firms were not viable in an open, competitive market, and the government interventions on prices, resource allocations, and market competition were required to maintain their survival. Those interventions inevitably led to the

prevalence of rent-seeking and crony capitalism, which finally resulted in unequal distributions of income, low efficiency, and social and economic instability (Krueger, 1974; Lin, 2003).¹⁸

This phenomenon also existed in some newly industrialized economies. Korea's situation serves as a good illustration. China's Taiwan Province has higher per capita income than that of Korea. But the *chaebols* in Korea are more technologically advanced and capital intensive than comparable firms in Taiwan Province.¹⁹ During the East Asian Financial Crisis in 1998, Taiwan's foreign exchange rates devalued by only 15% and it was the only economy that achieved positive growth in East Asia except for Mainland China, which was insulated from the crisis by its currency inconvertibility and control of capital accounts. Taiwan grew by 4.5% and 5.7% in 1997 and 1998, respectively, which is remarkable considering the terrible external environments at that time. As such, Taiwanese firms manifested themselves as being competitive and viable. The Korean economy collapsed in the East Asian Financial Crisis and Korea had to borrow heavily from the International Monetary Fund. After the elimination of state protection and subsidies to large firms in accordance with IMF rescue package's conditionalities, 20 out of 30 Korean *chaebols* have now gone bankrupt, which shows that these firms were not viable and could not survive without government protection.

In market economies, the protective measures provided to non-viable firms are similar to those in socialist economies: depression of interest rates, administrative allocation of bank loans to provide cheap funds to non-viable firms, and establishment of various import barriers to prevent competition from developed countries. The protected firms are in sectors, which go against the economy's comparative advantages, and could produce little economic surplus. The firms, consistent with the economy's comparative advantages, were discriminated against and found it difficult to develop. As a result, the funds that could be mobilized for development purposes would dry up eventually. If external borrowing was ruled out, as was the case in India, Pakistan, and most socialist economies, those economies stagnated; if

¹⁷ The view of former Indian Prime Minister Nehru is most representative of this. In 1938, before India's independence, he was the President of India's State Planning Commission. He wrote: „in the context of the modern world, no country can be politically and economically independent, even within the framework of international interdependence, unless it is highly industrialized and has developed its power resources to the utmost. Nor can it achieve or maintain high standards of

living and liquidate poverty without the aid of modern technology in almost every sphere of life.” (Nehru, 1946, p. 413). Quoted from Srinivasan (1994, pp. 155-6).¹⁸ India and Latin America are very typical of this. On India, see Swanmy (1994). On Latin America, see Cardoso and Helwege (1995).¹⁹ Take the IT sector as an example. Taiwanese firms, such as TSMC, mainly do OEM, while Korea’s Samsung and Hyundai Electronics carry out independent R&D and product innovations. For a comparative study on IT development strategies in Taiwan and Korea, see Lin (2000). Furthermore, in the automobile industry, Korea produces cars in entirety, while Taiwan is renowned only for parts production.

external borrowing by firms or governments was permitted, as in the Latin American countries, Korea, Thailand, and Indonesia before the East Asian Financial Crisis, debt crises ensued (Krueger, 1992).

When the debt crises break out, countries have to seek IMF rescues under the existing international financial arrangement. The IMF rescue packages usually come with conditionality, requiring a series of reforms and structural adjustments in the recipient countries. The concept of conditionality is itself based on the „Washington Consensus,” which requires that macro-policy distortions be corrected, that government intervention to banks and firms cease, and that corporate governance be improved. The Washington Consensus, reflecting the basic principles of neoclassical economics, implicitly assumes that firms are viable. Therefore, the conditionality aims to eliminate protections and subsidies without any attempt to solve the firms’ viability problem. If non-viable firms constitute only a small share of the economy, as is the case in Korea or Bolivia, shock therapy is possible and growth can quickly resume when increases in efficiency offset the shock of bankruptcy suffered by nonviable firms in the wake of Washington Consensus measures. However, if non-viable firms constitute a large share of the economy, as is the case in transitional economies, a leap forward following shock therapy would lead to an L curve rather than a J curve in the pattern of GDP growth after implementing the therapy (Lin, 1998).²⁰

Since the existence of non-viable firms is a common reality in socialist, transitional and developing economies, it is inappropriate to implicitly assume that firms are viable in the analysis of economic problems in these economies and to formulate reform policies based on the above analyses. Problems of viability should be taken explicitly into consideration in analyzing economic development and transition.

Upon reflection, neoclassical economics has been enriched through a process of abandoning

unrealistic and implicit assumptions. The basic framework of neoclassical economics was laid down in Alfred Marshall's „Principles of Economics” in 1890. Among others, Marshall's framework had several implicit assumptions, including perfect information, zero transaction costs, and the viability of firms in an open, competitive market.

Economic theories are instruments for people to explain what has been observed and to predict what will happen. According to Friedman (1953), the acceptability of a theory depends not on whether the assumptions of the theory are realistic, but whether the implications drawn from the theory are consistent with empirical observations. Marshall's framework is very powerful in explaining and predicting a number of economic phenomena in market economy — when prices of certain products increase, the purchase of those products will generally decline, for example. However, the assumptions in Marshall's framework also limit its explanatory power on certain issues. For example, under the assumption of perfect information and zero transaction costs, there will only be one price for a product in a competitive market, allowing little room for price differentiations.

One of the main contributions by George Stigler at the University of Chicago is to abandon the implicit assumption of perfect information and to introduce the concept of

²⁰ The difference in the shares of non-viable firms in the economy might explain why the shock therapy recommended by Sachs succeeded in Bolivia but not in the FSUEE economies. Bolivia is a poor, small economy. Therefore, the resources that the government could mobilize to subsidize the non-viable firms were small. Therefore, the share of non-viable firms in the economy must be relatively small. Stiglitz also questioned the universal applicability of the Washington Consensus (Stiglitz, 1998), but he did not consider the possible impact of non-viable firms on developing and transitional economies and their limitations on policy choices.

incomplete information into economics with the added considerations of the value of information and the cost of information collection and processing. His contribution makes information an important variable in modern economic analysis. Other economists, such as Joseph Stiglitz, George Akerlof, and Michael Spence, further emphasize that not only is information incomplete, it is often distributed asymmetrically among producers, consumers, and principles and agents. Furthermore, according to Marshall's framework, resource allocation by markets is most efficient. Knowing this, it is difficult to explain why there are firms operating in accordance with non-market allocation mechanisms. Ronald Coase contributes to neoclassical economics by

abandoning the zero transaction cost assumption and initiating research on contracts, property rights, and non-market institutions.

Economic theories are like maps. A map is not the real world itself, but a convenient tool for us to understand the surrounding environment and what will be seen in different directions. Maps, by nature, must be simplified, but if some important signs are ignored or incorrect, the maps will mislead our directions. When we discover the mistakes in a map and similarly in a theory, corrections must be made. Due to the prevalence of viability problems in socialist economies, transitional economies and developing countries, the implicit assumption of viability should be relaxed in analyzing economic problems and designing policies to solve problems in these economies. With the understanding that many firms may not be viable, transition and reform should be designed accordingly. The success of transition and reform depends on the creation of conditions that make non-viable firms viable, in lieu of following shock therapy and Washington Consensus reforms unconditionally.

In addition, the objective pursued in national development in developing countries must also be reformulated. Traditionally, political leaders, economists and the social elite in developing countries often aim to develop advanced technologies and industries similar to those of the most developed countries within the shortest periods of time as the objective of national development. However, the structures of industry and technology that are consistent with an economy's comparative advantages are endogenously determined by the economy's existing factor endowment structure. Ignoring the existing differences between its own endowment structure and that of developed countries, the government in a developing country often tries very hard with good intentions to develop the same industries and technologies as the developed countries. In effect, the government's efforts make firms in the priority sectors non-viable and lacking the ability to survive in open, competitive markets. Therefore, the government has to subsidize and protect these firms through price distortions, interventions in resource allocation, and so on. Rent seeking, soft-budget constraint, macroeconomic instability, income disparities, stagnation, and crises often are the consequences of the government's development attempts in spite of its initial good intention.

From the concept of viability, the objective of national economic development should be set as the upgrading of the economy's endowment structure. With the upgrading of the endowment structure in the economy, firms in an open and competitive market will upgrade their industrial,

product, and technological levels accordingly in order to ensure their competitiveness in the markets (Lin 2003). The endowment of land (and natural resources) in a country is given; the upgrading of endowment structure means an increase in the amount of capital to each worker. Capital comes from the accumulation of economic surplus. To upgrade the endowment structure most rapidly, a maximum economic surplus should be produced in each period, and a large proportion of this surplus should be saved for capital accumulation. If a country develops its industries, technologies, and products along the lines of its existing comparative advantages, the economy of the country will be most competitive, produce maximum possible amounts of surplus, create the highest possible returns to capital, and have the highest incentive to save. Consequently, the upgrading of the factor endowment structure in the economy will proceed most quickly.

Firms' decisions are concerned with product prices and production costs, but not with the factor endowment structure in the economy. Only when product prices reflect the prices of international markets and when the factor prices reflect the relative scarcities of various factors in the endowment structure will firms make their industrial, product, and technological choices in accordance with the economy's existing comparative advantages. And only with open, free and competitive markets can the product and factor prices possess the above characteristics. Therefore, maintaining openness and sufficient competition in the market becomes the basic economic function of the government in targeting the maximum upgrading of the factor endowment structure.

At the same time, as the factor endowment structure is upgraded, previously viable firms must upgrade their choices of industry, product, and technology accordingly in order to maintain their viability in open, competitive markets. The upgrading of industry, product, and technology is an innovative activity that requires firms to acquire information about appropriate new industries, products, and technologies. However, such information is not always freely available, and the search and analysis of information can be costly. If firms carry out these activities individually, they will keep the information secret, leading to repeated efforts in acquiring information in the whole economy. Since, to a large extent, information, after being collected and processed, has the nature of a public good with almost zero marginal costs for dissemination, the government can help to collect information on new industries, products, and technologies and provide the information free to the firms in the form of an industrial policy.

The upgrading of technology and industry in an economy often requires coordination among different firms and sectors. For example, the requirements for skills and human capital in new industries and technologies might be different from those of old industries and technologies. A firm might not be able to internalize fully the supply of all new requirements and then must rely on help from its external environment. Besides human capital, upgrading might also require new financial institutions, trading arrangements, and marketing channels. The government's industrial policy may therefore be useful for coordinating desirable changes in various industries sectors, and institutions for a successful upgrading in the economy's industries, products and technologies.

The upgrading of industries, products, and technologies is a risky, innovative undertaking. Even with information and coordination provided by the government, a firm following the industrial policy may fail due to over ambition for upgrading in the industrial policy, the small scale of new markets, and/or failure in the coordination of various aspects of changes. A firm's failure will shed light on the inappropriateness of the industrial policy and will be a useful indication to other firms so that they can avoid further failure by not following the policy. That is to say, the first firm pays the costs for its failure and at the same time provides valuable information to other firms. If the first firm succeeds, it will induce other firms to carry out similar upgrading, thus resulting in the dissipation of innovation rents for the first firm. Therefore, the costs of failure and the benefits of success for the first firm are not entirely symmetric. To compensate for the possible asymmetry in costs and benefits stemming from the externalities of the first firm's success and failure to other firms, the government could consider subsidies such as tax incentives or credit guarantees to those who respond first to the government's industrial policy.²¹

The above policies aim to develop a country's industries according to its comparative advantages can help developing countries to make full use of technological gaps between themselves and developed countries and accelerate economic development through low-cost borrowing of technology. This approach will help developing countries realize income, industrial, and technological convergence with developed countries (Lin 2003). It is worthwhile to note that industrial policies can be used both in development strategies aiming at upgrading the endowment structure and in development strategies aiming directly at promoting advanced industries, products, and technologies. In the former case, the industries to be targeted are

consistent with the economy's comparative advantages and the firms in these industries are viable, subsidies should be of a limited amount and duration—sufficient enough to compensate for information externalities. In the latter case, the industries to be targeted violate the economy's comparative advantages and the firms in the industries are non-viable, and, therefore, long-lasting subsidies and protections from the government are required for the implementation of this type of industrial policies.

5. Viability and Economic Transition

The firms in heavy industries prioritized by the government in traditional planned economies are not viable in open, competitive markets. The objective of the transition from a traditional planned economy is to establish an open, competitive market economy. In the process of transition, however, the viability problem of those firms in the sectors inconsistent with the economy's comparative advantages turns from implicit to explicit. Whether the transition will be stable and successful very much depends on how the viability problem is solved.

Non-viable firms cannot survive in open, competitive markets without government subsidies/protections. The shock therapy in FSUEE that aims to eliminate all distortions and government interventions quickly, if implemented forcefully, will inevitably lead to large-scale bankruptcy and unemployment, thus prompting economic collapse and social instability. The results are understandably not acceptable to a functioning government. Consequently, many governments in FSUEE have to find ways to provide protections/subsidies continuously to a large number of non-viable firms, resulting in an embarrassing situation of shock without therapy (Galbraith 2002).

China has adopted a gradual, piecemeal, dual-track approach since the transition started in

²¹ Most „big push” attempts in developing countries in the 1950s and 1960s failed. However, the influential paper by Murphy, Shleifer, and Vishny (1989) reignited interests in this idea. Their paper shows that government coordination and support might be necessary to set up strategic industries and that demand spillover from key sectors to other sectors will stimulate economic growth. However, to achieve such success, those sectors that are supported and promoted by the government must be consistent with the comparative advantages in the economy, and firms in their various sectors must be viable after they are set up. Deviation from comparative advantages is the reason why so many „big push” attempts failed in developing countries in the 1950s and

1960s.

1979: on one hand, the Chinese government has relaxed their strict control of resource allocation and has allowed new entries to sectors in which China's economy has comparative advantages; and, on the other hand, the government has continued to provide protections and supports to firms in traditional sectors to buffer them from the threat of bankruptcy, while taking measures to reform them. The first leg of this approach have enhanced the efficiency of resource allocation, created new resources, and provided conditions for the reform of traditional sectors; and the second leg has prevented the collapse of economy during the transition process. This dual track approach has maintained social and economic stability, achieved dynamic growth, and ensure the transition to be Pareto or Kaldor improvements (Lin, Cai and Li 1996).

However, China's transition towards a market economy depends on a final solution to the viability problem for firms in the traditional sectors. Since the viability problem is not solved, the Chinese government is required to continue the interventions to markets in order to protect/subsidize the nonviable firms and some consequences will accompany the interventions. For example, along with China's rapid economic growth in the transition process, the share of non-performing loans in the four big state-owned commercial banks increases sharply, corruption is widespread, and regional income disparities are widening. To a large extent, these problems arise from the fact that SOEs still depend on government subsidies and protections to survive. After 1983, the measure adopted by the Chinese government to support SOEs changed from the direct fiscal appropriation to the offering of low interest-rate loans from the four state banks. Currently, over 70% of loans from the four state banks go to SOEs, but due to their poor performance, many SOEs have been unable to repay the loans. Therefore, the banks accumulate large amounts of non-performing loans. To support SOEs, the government also limits the market entry of private interests into certain sectors so as to give SOEs in those sectors monopoly position. Therefore, rent seeking to obtain preferential loans or market entry licenses are prevalent among SOEs and non-SOEs, adding fuel to the widespread corruption. In addition, to subsidize SOEs, the government artificially depressed the prices of agricultural products and minerals in the traditional planning system. Such price distortion is maintained as a way to continue the subsidies to the nonviable SOEs after the transition. The comparative advantages of eastern China lie in manufacturing industries, those of central China lie in agriculture, and those of western China lie in minerals and natural resources. After the transition, the eastern region has

made huge progress in the development of manufacturing industries by taking advantage of the superior geographical and market conditions and increase substantially imports of low-priced agricultural and mineral products from the central and western regions. In essence, the relatively poor central and western regions have been subsidizing the development of relatively rich eastern, industrial region. The regional disparities are widening as a result. If the viability problem of SOEs is solved, there will be no reasons to continue the subsidization and protectionism through low-interest loans, monopolistic practices, and the depression of prices for agriculture and raw materials. The remaining distortions and government interventions can be eliminated (Lin, Cai and Li 2001).²

The viability problem of SOEs can be solved according to four different categories, depending on the nature of SOEs' outputs (Lin, Cai and Li 1998 and 2001). The first is mainly the defense-related SOEs whose production, intensive in both capital and technology, run against China's comparative advantage, but their outputs are essential for national security. For this group of SOEs, direct fiscal appropriation is necessary for their survival and the government should directly monitor their production and operations. It is reasonable to expect that there are only a few SOEs in this category. The second group of SOEs also requires intensive capital and technological inputs for their production, but their outputs are not sensitive in national security and their outputs have large domestic markets. Examples of this category are telecommunication and automobile industry. For this category of SOEs, the government can adopt a „market for capital” approach to get access to capital from international markets and remove the adverse impact of domestic endowment structure on these firms' viability. There are two ways to achieve this goal: one is to encourage SOEs to go public on international equity markets; the second is to

² Besides the viability problem, the SOEs in China have an additional problem of social burdens. Before the economic transition, the investment in heavy industry provided limited employment opportunities. The government was responsible for urban employment and usually assigned several workers to a job, resulting labor redundancy in SOEs. The workers also received low wages, which were enough for covering current consumption only. Before the transition, SOEs remitted all their revenues to the government, and the government used fiscal appropriation to cover SOEs' wages, pensions of retired workers and other expenditures. Therefore, the labor redundancy and the pension expenditure was not a burden to SOEs. After the reforms, SOEs started to be responsible for their workers' wages and retirement pensions. The newly established TVEs, joint ventures, and other non-state firms are in sectors that are consistent with China's comparative advantage and they do not have the problem of labor redundancy and unfunded pension for retired workers. I call the issue arising from the viability problem as the SOEs' „strategic burden” and the addition cost arising from labor redundancy and pension expenditure as SOEs' „social burden.” Together they constitute the SOEs' „policy burdens”. As long as policy burden exists, the government is responsible for the firms' loss and the soft-budget constraint cannot be eliminated (Lin and Tan 1999). There is a consensus in China about the necessity and the way to eliminate the social burdens. Therefore, the remaining issue is how to solve the strategic burden.

set up joint ventures with foreign companies and get direct access to foreign technologies and capital. China Mobile, China Telecom, and China Petroleum follow the first approach and many automobile makers in China follow the joint-venture approach. The third category of SOEs has limited domestic markets for their outputs and thus this group of SOEs cannot adopt the „market for capital” approach. The way for them to solve the viability issue is to make use of their engineering and managerial capacities and to shift their production to labor-intensive products, which have large domestic markets and at the same time are consistent with China’s comparative advantages. The most famous example of this approach is the color TV maker, Changhong. This firm used to produce old style military radar. After switching to the production of color TV, the firm has dominated Chinese market and very competitive in international market. Most SOEs have advantages in engineering and managerial personnel. If they are provided the conditions to shift their production lines to labor-intensive products, many of them can become viable. The fourth group consists of non-viable firms that lack engineering capacity and are thus unable to shift their production to new markets. These SOEs should be allowed to go bankrupt.

After the viability problem of the existing firms is solved, whether or not a firm can earn acceptable profits in an open, competitive market becomes the responsibility of the firm’s managers. The performance of a firm will depend on the corporate governance, incentive mechanism, and other factors, as discussed in neoclassical economics. The government will no longer be responsible for a firm’s performance. Only then can the reform of institutions that are inherited from the traditional planning system with the functions of subsidizing and protecting SOEs be carried out thoroughly and the transition from a planned economy to a market economy can be completed.

6. Conclusion

In this paper, I discuss the limitations of the existing neoclassical framework, based on the failure of transitional policies designed according to neoclassical economics and the unexpected adverse effects of „Washington Consensus” in handling many economic crises in developing countries. The current framework of neoclassical economics, beginning with Marshall, implicitly assumed that a firm existing in the market is viable, that is, the firm is expected to earn a socially acceptable profit in an open, and competitive market as long as the firm has normal management. With this implicit assumption, the focus of economic research is on the problems of corporate

governance, competitive environment, the arrangement of property rights and other factors that may obstruct a firm's management. However, many firms in transitional economies and developing countries are not viable because, due to their governments' ambitious development strategy, they have entered into sectors that are inconsistent with their economies' comparative advantages. In an open, competitive market, these firms, even with normal management, will not be able to earn acceptable profits. To set up these firms and to maintain their continuous operations, the governments in these countries provide these firms with protections and subsidizations through price distortions, limitations on market competition, administrative allocation of all kinds of resources, and so on. The results of these interventions are inadequate competition, lack of effective corporate governance, rent seeking, disparities in income distribution, inefficient resource allocation, and, quite possibly, economic crisis. Under the influence of the existing neoclassical framework, when designing policies for economic transition or crisis management, economists and governmental officials are likely to focus on strengthening property rights, improving corporate governance, removing government intervention in resource allocations, and so on, to improve the efficiency of market function. They are not aware of the fact that those market-impeding distortions and interventions in fact are endogenous to the firms' viability problem. When a majority of the firms in an economy are non-viable, the implementation of these reform and transitional policies lead sometimes to an awkward situation of shock without therapy in FSUEE and the lost decades in other developing countries (Easterly 2001; Lin and Liu 2003).

Since many existing firms in socialist planned economies, transitional economies, and developing countries are not viable, it is necessary to relax the neoclassical framework's implicit viability assumption in dealing with problems in the socialist planned economies, transitional economies, and developing countries. The explicit consideration of the viability problem will also help to define the economic functions of governments in developing countries, preventing them from adopting comparative-advantage defying development strategies to set up non-viable firms and enabling them to achieve convergence with developed nations in an expedient manner (Lin 2003).

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