

Viability, Economic Transition and Reflections on Neo-classical Economics¹

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Abstract: Many transition policies, based on neoclassical economics, failed in Eastern Europe, Former Soviet Union, and China. The paper argues that the failure is due to the viability assumption of the neoclassical economics. The neoclassical economics implicitly assumes a firm to be able to earn a socially acceptable profit in an open, competitive market if the firm has a 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 have normal management because they are in sectors in which the economies do not have comparative advantages. With the viability assumption, the policies, based on neoclassical economics, focus on issues related to property rights, corporate governance, government interventions and other issues related to firms' management. However, many of those issues are in fact endogenous to the firms' viability problem. Therefore, without addressing the firms' viability issue, those policies fail to achieve its intended goals. Not only in the socialist and transition economies but also in developing countries many firms are not viable. The paper suggests to relaxing the viability assumption in the neoclassical economics when analyzing issues in socialist and transition economies, as well as in developing countries.

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I. Introduction

In the 12 years from 1978 to 1990, China's reform and opening up achieved remarkable progress, with its GDP growing 9.0% annually and trade volume growing at 15.4%. During this period, urban per capita income grew 5.9% annually, but that of rural areas grew at a spectacular rate of 9.9% annually (NBS, 2002 pp.17, 94,148). People's living standards and incomes increased significantly and urban-rural disparities fell. The achievement of China's reform can be called a miracle in economic history. However, in the late 1980s and early 1990s, international economic research community did not understand much about China's reform, and many economists were far from optimistic.² Most economists believed that a market economy should be based on private property, a feature that the Chinese economy apparently lacked at that time. China's state-owned enterprises (SOEs) were not privatized; a dual-track resource allocation system was prevalent with state planning still playing a very important role. They 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, which constituted an inferior institutional arrangement. (Balcerowicz, 1994; Woo, 1993; Sachs and Woo, 1994 and 1997; Qian and Xu, 1993.). Some economists even claimed that China's transition would finally fail due to incomplete reform (Murphy, Schleifer, and Vishny, 1992; Sachs, Woo, and Yang, 2000).

At that time, most economists were optimistic about reform in the Former Soviet Union and Eastern Europe (FSUEE hereafter) due to the fact that these countries reformed their economies according to the fundamental principles of neo-classical economics. The most representative of these principles 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 Vishny, 1995.) These components are considered the base of an efficient economic system in neoclassical economic theory.

Economists recommending 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 economy would grow after six months or a year following an initial downturn stemming from the introduction of shock therapy (Brada and King, 1991; Kornai, 1990; Lipton and Sachs, 1990; Wiles, 1995). According to their beliefs, the FSUEE would overtake China through their reform, though the former started their reforms much later, and China's difficulties would loom larger due to inconsistencies inside the economic system brought about by incomplete reforms.

Ten years have elapsed since the predictions of many renowned economists were put forth in the early 1990s. Contrary to these predictions, China's economy has grown in the past decade

² There were also economists that held China's reform in high regard: 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.

while those countries that implemented the shock therapy experienced serious inflation and economic decline. Russia's inflation reached 8414% in 1993, and that of Ukraine reached 10155%. In 1995, Russia's GDP was only half of what it had been in 1990, and Ukraine's situation was worse with a 60% decline during the same period.³ With significant declines in per capita income and extreme exacerbation of income disparities, all social indicators slid—male life expectancy in Russia decreased from 64 years in 1990 to 58 in 1994 (Gregory and Stuart, 2001, p. 470). Overall, the countries that implemented shock therapy experienced great difficulties in reform, in contrast to the optimistic expectation of most economists. In eastern European countries, Poland scored best in economic transition with only a 20% decline in its GDP. Poland did not really implement reform based on shock therapy, however. Although prices in Poland were liberalized, most of its large SOEs have yet to be privatized (World Bank, 1996; Dabrowski, 2001).⁴

In the 1990s, the Chinese economy did suffer from a myriad of problems. For example, the SOE reforms initiated in the early 1980s have yet to be completed; inter-regional and urban-rural disparities have enlarged; and there are still many serious problems in financial system awaiting solution. However, the national economy grew 10.1% annually in the 1990s, 1.1% higher than that of the previous 12 years. International trade grew also at a rate of 15.2% in the last decade (NBS, 2002, pp. 17,94). Moreover, people's living standards improved rapidly, especially in urban areas.⁵ Economic development in China not only promoted the welfare of the Chinese people, but also contributed greatly to the world economy. During the Asian Financial Crisis, the Chinese currency (RMB) did not depreciate, which played an important role in Southeast Asian economies' quick recovery and growth.

Chinese economic reform achieved substantial progress even in the 1980s. Why then were most economists not optimistic about China? Many famous economists from Harvard and MIT who participated in FSUEE reforms, such as Jeffrey Sachs, Stanley Fisher, Oliver Blanchard, Andrei Shleifer, Robert Vishiny, Rudiger Dornbusch, Paul Krugman, Richard Layard, Lawrence Summers, and so forth, all masters in economics who have been working at the frontiers of economic research. Why couldn't they predict and explain the difficulties brought about by shock therapy, and why, at the same time, were they pessimistic about China's prospects? As pointed out by Murrell (1995) and Stiglitz (1999) and others, these 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 their failures are also due to the fact that the current neo-classical economics has some congenital limitations in analyzing economic transition. This paper is structured as follows: Part II defines the concept of viability and points out that the neo-classical economics implicitly assumes enterprise to be viable and that most enterprises in traditional planned economies are nonviable due to their governments' overtaking development strategies. In part III, I will explain why the transitional policies designed with the viability assumption not only cannot suit the remedy to the

³ *The Economics of Transition*, Vol. 4, No. 1, pp. 282-3.

⁴ As to the inflation rates and GDP growth rates of the FSUEE economies after economic transition, see Lin, Justin Yifu, Fang Cai and Zhou Li, *China's Miracle (second edition)*, Shanghai Sanlian Press, Shanghai, 2000. Tables 1.1 and 1.2.

⁵ Before the 1990s, new buildings in Beijing and Shanghai were hard to find, but Beijing has turned into a modern international metropolis since then and the Pudong district in Shanghai took the foreign community by great surprise for its rapid achievements.

cases of both the FSUEE and China, but also would foster results contrary to one's wishes. Part IV illustrates that the problems of enterprise viability are prevalent both in developing countries and countries in transition; thus it is necessary to explicitly consider the viability issue in the theoretical models when applying neoclassical economics in the analysis of transition and development. Part V explains why the successful transition from a traditional planned economy to a market economy lies in the successful solution of enterprise viability problems—China's SOE viability problem is referred to as an example. Part VI concludes.

II. Viability and Reflections On Neo-Classical Economics

Theories should be able to explain and predict phenomena. If not, the theories must have some fundamental flaws (Friedman, 1953). The neo-classical economic 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.

Neo-classical economics has a well-known basic assumption of rationality: given all possible choices, a decision maker will always choose to maximize his or her objective function. However, there is another implicit assumption—the “viability” assumption as I call it—that is taken by economists for granted in their analyses. I define the term viability with respect to the expected rate of profit of a firm in an open, free, and competitive market. If, without any external subsidies or protections, a normally managed firm is expected to earn a socially acceptable normal profit in a free, open, and competitive market, then that firm is viable.⁶ Accepting the viability assumption in their analyses, economists will conclude that an enterprise must lack normal management if it does not achieve acceptable profitability in a competitive market, and infer that the problems must come from corporate governance, incentive mechanisms, excessive government interventions, or property rights arrangement that impede the enterprise's normal management. These problems did show up in SOEs in socialist economies; thus, under this theoretical framework, the success of socialist economic transition depends on the elimination of the problems of property rights, corporate governance and government intervention. The reforms of “shock therapy” are based on this theoretical foundation.

The neo-classical economics has been developed in developed economies and try mainly to explain what happens in developed countries. It is reasonable to assume that enterprises in developed economies are viable, since, except for a few minor sectors, governments in these countries rarely give subsidies and other types of support to enterprises. An enterprise with normal management that is not expected to earn acceptable profits in the market will not attract investment in the first place. If such an enterprise is established due to misleading information, investors can also vote ex post facto by withdrawing their investments so that the enterprise will not survive. There, enterprises that can survive in an open and competitive economy must be viable, i.e., they can earn acceptable profit with normal management. Therefore, it is appropriate to take the viability of enterprises as an implicit assumption for economists in developed countries

⁶ Obviously if a normally managed enterprise is not expected to earn a socially acceptable profit in an open, free, competitive market, no one will invest on the enterprise. It is thus not viable. The term “viability” was first introduced in a joint paper with Tan Guofu to the AEA annual conference in 1999. The concept was already put forth, however, in Lin, Justin Yifu, Fang Cai, and Zhou, *the Chinas Miracle: Development Strategy and Economic Reform 1994* as the analytical basis for a traditional planned economy. The most comprehensive analysis of this concept can be found in “Development Strategy, Viability, and Economic Convergence,” presented at the first annual D. Gale Johnson Lecture” at the University of Chicago (forthcoming in EDCC, Vol. 51 (January 2003).

that develop the neoclassical economics.

However, in transitional economies and developing countries, many enterprises are not viable i.e., they cannot earn acceptable profits even with normal management. Why? This relates to whether the sector in which the enterprise operates, the products it produces, and its technological choices in production are consistent with the comparative advantages determined by the factor endowment structure, namely the relative abundances of labor, capital, and nature resources in that particular economy.

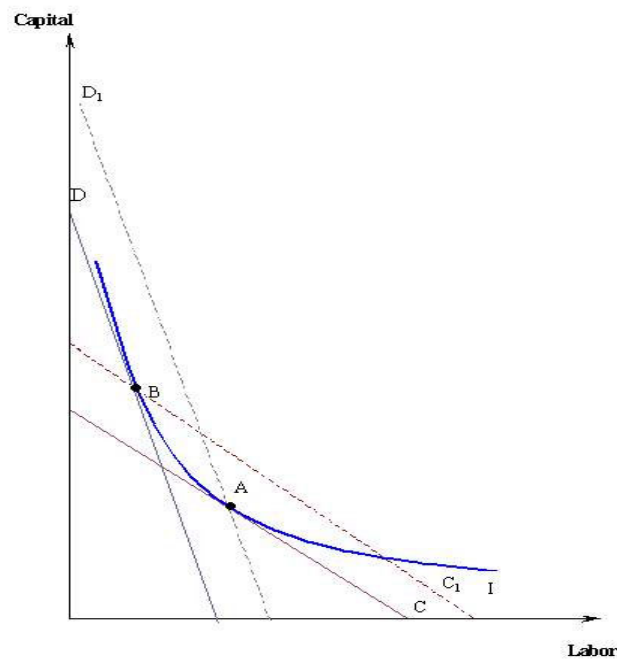


Figure 1: Relative Price of Production factors and Technique Choice

Figure 1 depicts, a simple free, open, and competitive market economy that produces only one product with two production factors—capital and labor. Curve I represents the different technologies or combinations of capital and labor required to producing a given amount of a

certain product.⁷ The technology represented by A is more labor intensive than that of B. In a competitive economy, which technology is better depends on which technology is more cost-effective. 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 an enterprise incur loss in a competitive market. For example, if the technology represented by B were adopted, the loss incurred would be the distance from C to C₁. Market competition will make firms that adopt technologies other than A nonviable. Therefore, in a competitive market with given relative prices of labor and capital, the viability of a firm depends on its choices in technology.

Whether the isocost line looks more like C or D depends on the endowment structure of the economy. When labor is relatively abundant and capital is relatively scarce, the isocost line will be something like that of line 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 a competitive market depends on whether its choice of technology rests on the point of least cost as determined by the relative availability of production factors in the economy. If not, the enterprise is not viable and cannot survive without government subsidies and support.

This conclusion can also be extended to multi-product and multi-industry cases, that is, in a free, open, and competitive market economy, whether or not an enterprise is viable depends on whether its industry, product, and technology choice is consistent with the comparative advantage determined by the factor endowment structure in that economy.⁸ If choices are not consistent with this, the enterprise cannot achieve acceptable profits even under normal management and must rely on government subsidies and protection.

A good example that illustrates this concept of viability is agriculture in Japan. The Japanese agricultural sector is dominated by small farms with farmers being both owners and operators of the farm, thus there are no problems of property rights and corporate governance.⁹ 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 protection, without which most Japanese farms cannot survive.¹⁰

Many SOEs in transitional economies face the same problem of viability as Japanese farms, due to the fact that these SOEs, especially the large SOEs in heavy industries, are established by governments with the aim of surpassing the industrial and technological levels of industrial countries, thus running against the comparative advantages of their particular economies.

⁷ The curve can be considered as the envelope of all different kind of technologies that can be used to produce the product.

⁸ As to detailed discussions on viability in a multi-good or multi-sector context, see Lin, 2003.

⁹ 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.

¹⁰ The price of rice in Japan is about 8 times that of international prices. Japan's deflation has lasted for more than a decade since 1991. The formation 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 their 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 agriculture sector.

As a matter of fact, the traditional planning systems that existed before economic transition were formed to support and protect these non-viable heavy industrial enterprises that were not consistent with the economy's comparative advantages.¹¹ Transitional economies such as Russia and China's were capital-scarce, backward, agricultural economies before those countries implemented a traditional planned economy. In a capital-scarce developing country, the development of capital-intensive heavy industrial projects must overcome numerous difficulties. First, heavy industrial projects require large investments and take long periods of time to construct; Second, the key equipment and technologies necessary for heavy industrial development must be imported; Third, the initial investments are dauntingly large. At the same time, for developing countries lacking sufficient capital, it is very hard to develop these heavy industrial sectors. Mobilization of decentralized economic surplus, furthermore, cannot rely on market mechanisms. This is especially true in those agriculturally based countries that also manifest three characteristics in their economic system: (1) A low economic surplus resulting in lack of capital. If markets determine interest rates, those rates will be extremely high; (2) Low levels of export resulting in a shortage of foreign exchange. If exchange rates are determined by the market, the price of foreign currency will be high; (3) A small and dispersed economic surplus in agricultural sector, which makes it hard to mobilize resources.

Therefore, to sustain long-term projects, the government has to depress interest rates; to ensure low prices of imported equipments, the government has to distort exchange rates and artificially overvalue domestic currency; to mobilize surplus, the government has to increase the profitability of established enterprises by depressing prices of various inputs—including wages—and by giving these enterprises monopolistic rights in product markets. The distortion of these price signals necessarily leads to shortage of funds, capital, raw materials, and living necessities. To ensure that these scarce resources are allocated to prioritized sectors and projects, state planning and administrative measures have to be pursued in allocation of funds, foreign exchange, and raw materials, and in this way we see the emergence of a traditional, planned economy.

In an economic system with price distortions and dominant planning, if enterprises are privately owned, the state cannot ensure that the surplus mobilized through price distortions will be reinvested in heavy industrial projects according to state planning. Therefore, nationalization becomes an institutional arrangement in which the state directly controls existing surplus.¹² In this kind of planned system, if enterprises are in sectors of prioritized final goods, and if they are in a government system with monopolized product markets (leading to high prices) and enjoy cheap inputs, they can be guaranteed high profitability; In contrast, if enterprises are in sectors that produce living necessities or intermediate goods for heavy industrial sectors, their product prices will be artificially depressed in government's plan and loss could be incurred even with good management. Therefore, profitability, to a large extent, does not depend on management, but on the position of enterprises in the industrial chain. With asymmetrical information, incompatible incentives, and lack of market competition, the government does not know what normal levels of

¹¹ As to the logic in the formation of a traditional economic system, see Lin, Cai, and Lin (1994, 1999).

¹² Private entrepreneurs seek to maximize profits and returns on capital. Light industrial products suffer a shortage in traditional systems and have high market prices. Furthermore, due to the short gestation nature and low-capital requirement of light industry, rates of return in light industries must be higher than that of heavy industries. Therefore, if the enterprises are owned by private entrepreneurs and allow the private entrepreneurs to make investment decision autonomously, they are most likely to invest in light industrial sectors.

profitability should be for a profitable enterprise; neither does it know what levels of loss should be considered as normal for a loss-making enterprise. Given enterprise autonomy, moral hazards will entail. To prevent the erosion of surplus created by price distortions, the autonomy of enterprises in allocation of personnel, funds, materials and decision making powers in production, supply, and marketing must be deprived in traditional, planned economic systems (Lin, Cai, and Li, 1997; Lin and Tan, 1999).

As a matter of fact, the various institutional arrangements such as price distortions in funds, foreign exchange rates, raw materials, wages, and commodity prices, the replacement of market mechanism by plan allocation, and the deprivation of enterprise autonomy, are all endogenous to the fact that the enterprises prioritized by government development strategies are not viable in an open, free, competitive market (Lin, Cai, and Li, 1994). In the terms of neoclassical economics, these arrangements are considered “second best” under given constraints, with which the decentralized surplus in different sectors can be mobilized to the greatest extent and invested in priority sectors by the government. Therefore, a backward agricultural economy such as China’s can develop A-bomb and satellite technology within a short period of time. However, resource allocation is inefficient and incentives in enterprises are low, owing to a lack of autonomy—enterprises and workers are not rewarded according to performance.¹³

Many enterprises in socialist planned economies are not viable due to which a set of market-intervening institutional arrangements is developed endogenously. Therefore, it is not surprising that neo-classical economics with its implicit viability assumption is inadequate in effectively analyzing the phenomena of and addressing the problems in socialist and transitional economies.

III: Neoclassical Economic Theories and Policy Measures in Economic Transition

Many distortions and specific institutional arrangements can be found in socialist countries, such as ineffective corporate governance, government intervention into enterprise operation, cronyism, soft-budget constraints, and government intervention into finance and foreign trade, etc., which create an economic system suffering from inefficiency. To a large extent, these interventions and institutional arrangements are endogenous to the fact that the enterprises prioritized by government development strategies are not viable. If the problem of non-viability is not addressed, and if the government is unwilling or unable to let enterprises go bankrupt, the distortions will not be eliminated.

What we know about the real world is limited by the model of world in our mind (North, 2002). The viability assumption is implicit in neo-classical economics. Trained under such a framework, economists tend to think that neo-classical economic theories are appropriate instruments in the analysis of problems in transitional economies, particularly when they see the familiar problems of corporate governance, property rights, and government interventions that have proven harmful to economic efficiency in neo-classical frameworks. But they ignore the endogeneity of these problems to the non-viability of prioritized enterprises in government’s development strategy. Invited by transitional economies to design their transition policies, economists often place emphasis only on privatization, elimination of government intervention,

¹³ For efficiency indicators for China before transition, see Lin, Cai, and Li (1993, ch. 3). For a detailed study on efficiency in the Former Soviet Union, see Desai (1990).

and complete liberalization. In this regard, a remarkable consensus often emerges among well-trained economists (Summers, 1994, p. 252-3).¹⁴

The most prevalent reform policy of neo-classical economic theory is the so-called Washington Consensus which calls for strengthening fiscal discipline, increasing public investments to improve income distribution (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 is based on this Washington Consensus (Kolodko 2001). Therefore, we can understand why, in the 1990s, views were more optimistic about reforms in the FSUEE that implemented shock therapies, but less so on the piecemeal, gradualist reforms taking place in China.

The theoretical framework of neo-classical economics not only has an impact on the views of economists working on issues related to developed, market economies, but also influences the views of economists working on issues related to other economies. For example, in the debate of 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 enterprises in a socialist economy as an implicit precondition in their analyses.

The neo-classical economics also influences the view of economists living in other economies when they analyzed their own problems. Kornai of Hungary is perhaps one of the most eminent economists specializing in socialist economic problems. In this, his most prominent contribution is the concept of “soft-budget constraint” (SBC) (Kornai, 1986). In many socialist countries, enterprises suffering from poor management can ask for preferential treatment and subsidies, while similar enterprises in market economies have no choice but to go bankrupt. Kornai proposed that SBC is the main reason for a lacking initiative to improve production and for the high prevalence of moral hazards in and among SOEs. He attributes the existence of SBC to the paternalism of socialist governments toward SOEs. Therefore, reform in property rights and the severance of enterprise-state connections must be carried out in order to eliminate SBC and to promote enterprise efficiency. The theoretical framework of Kornai also unconsciously assumes the viability of SOEs in socialist countries. However, the SBC in socialist economies emerges essentially from enterprise non-viability. In an open, free, competitive economy, these enterprises would not be able to pull investments and would cease operation completely. To establish these non-viable enterprises, governments must take on the responsibilities of protecting and subsidizing. Enterprises always have incentives to attribute their losses to insufficient government supports/protections, even when the losses incurred due to incompetent operation and faulty management. Governments never know what levels of protection and subsidy are adequate, however, due to information asymmetry. Therefore, the government cannot resist the enterprises’ requests for more supports and the enterprises’ budget constraints become soft (Lin and Tan 1999). Therefore, the SBC of SOEs essentially results from the problem of non-viability rather than the paternalism of socialist governments. Similarly, even in non-socialist countries,

¹⁴ Certainly there were exceptions. For example, Murrell (1991) questioned the power of neoclassical paradigm to explain the differences in the economic performance of market and centrally planned economies and the appropriateness of using the neoclassical economics to underpin the reform of centrally planned economies.

SBC still exists in the non-viable enterprises promoted by governments. The case of Korean large enterprise groups, *chaebols*, is illustrative of this truth. In addition, enterprise SBC will not be removed even in such case that a socialist government is overthrown and all enterprises are privatized.¹⁵

With the above reasoning, reforms in the property rights arrangement, government intervention, and corporate governance according to neo-classical economics that neglects the problem of enterprise's viability problem usually cannot achieve the reform policies' initial goals and often lead to further deterioration of enterprises performance. In the FSUEE, the socialist governments were removed and shock therapies and privatization were implemented, but the SBC of enterprises still existed and the incentives of privatized enterprise managers to bargain for more supports became significantly higher than those of SOEs.¹⁶ According to the World Bank's 1996 World Development Report, after full-scale privatization in the FSUEE, the subsidies that enterprises received from governments did not decrease—in some cases they even increased.¹⁷ At the same time, taxation capacities were weakened significantly after the shock therapy. This, combined with high subsidies to enterprises, led to extremely large amounts of inflation in these countries.

It is not only that the shock therapy laid out by the existing neoclassic economics did not work in the FSUEE, it also happened that the reform measures based on neo-classical economics or the experiences of developed economies suffered similar problems in China. Since 1978, when China initiated its reform, 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 township and village enterprises (Lin and Yang 2001). These reforms were not designed by reformers *ex ante*, but by reform measures prompted by peasants spontaneously in practice. In the 23 years of China's reform, many of the reform policies designed by the Chinese government suffered the same fate as the shock therapy in the FSUEE. Take the reform of SOEs as an example:¹⁸ At the beginning of reform in the early 1980s, it was regarded that the root of SOE problems lied in the lack of autonomy for SOE managers with subsequent incentive incompatibility stemming from no rewards for performance. Therefore, the reforms of decentralization were carried out to promote managerial autonomy and to allow SOEs to retain a certain share of profits for their own purposes. These measures were effective in pilot

¹⁵ After realizing that privatization did not help to solve SBC and improve enterprise efficiency, many economists realized the importance of improving corporate finance and market competition. As former Chief Economist of the European Bank, and current Vice President and Chief Economist of the World Bank Nicolas Stern commented, "good corporate governance of public enterprises 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 share-holding companies in China did not show significant differences in their financial indicators from non-listed companies after 5 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, 1997).

¹⁶ Before the introduction of "shock therapy," enterprises 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 them 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.

¹⁷ According to empirical research, some enterprises after privatization increased their efficiency, but others did not. (Lavigne, 1995, p. 175; Djankov and Murrell, 2002). I believe the key lies in whether the enterprise is viable before privatization. If it is, then efficiency will increase after privatization, if it is not, such enterprises will realize a downfall in efficiency.

¹⁸ Regarding academic debates and policy measures on SOE reform, see Lin, Cai, and Li (1997).

programs, but became ineffective—increasing productivity and decreasing profitability—when they were instituted nationwide. Many scholars thought the problem lied in the arrangement of property rights as the enterprises were owned by the state but were operated by the managers, who were not the owners and did not have incentives to care about the returns to the equities. Up until the late 1980s and early 1990s, reforms were directed towards drafting a clearer definition of property rights and promoting modern corporate governance with the establishment of boards of directors and supervision boards. The best arrangement of property rights and corporate governance was considered to be the publicly listed companies, since the value of the enterprise would be evaluated before it went public and after being listed, the company would be publicly owned with equities held in both state and private investors. In addition to the board of directors, non-state shareholders would also have incentives to monitor enterprise management and operation since they concern about the returns to their private investments. Nevertheless, in reality after a few years the financial performance of the listed companies did not differ from those of non-listed companies (Lin Yixiang 1999). In the beginning, it was thought that this was due to the fact that non-state stocks were owned only by diversified, small, individual investors, who had little incentive to monitor the managers because the returns to a small individual stockholder's 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 higher turnover rates and short holding periods. Then it was thought that share-holding companies in developed countries were mostly held by institutional investors, with the capacity to hold a substantial portion of the total shares of a listed company. In addition, the institutional investors could afford professional analysis of listed companies' financial reports, thus allowing them to supervise enterprises more effectively. To achieve this, investment funds were introduced into China in 1998. However, speculation in stock markets took a turn for the worse, with investment funds manipulating stock prices. How could this happen? The reason still lies in the problem of non-viability of these listed companies. Without the ability to earn acceptable profits in free, open, competitive markets, these companies cannot distribute dividends to shareholders, thus the small individual shareholders can only profit through speculations on stock prices. Although institutional investors own large amounts of shares, they cannot gain by holding the stocks for a long term due to the non-viability and lack of profitability of those listed companies. With large amount of money in their commands and a small portion of stocks in circulation for each listed company,¹⁹ these institutional investors resort to manipulation of stock prices for their profits (Lin, 2001). In conclusion, the failures of copying developed countries' experiences or of designing reform policies according to neo-classical economics lie in the fact that the viability is a precondition for existing enterprises in developed countries and an implicit assumption in neo-classical economics; however, most enterprises in transitional economies are not viable.

IV: The Prevalence of Viability Problems and the Expansion of Neo-classical Economics

The problem of viability is not only the key problem in transitional economies, it is also a widespread problem in developing countries. Upon seeing the decisive role of industrialization

¹⁹ For a listed company in China only about 25 percent of the total stocks was issued to the non-state investors and could be traded in the stock markets. The other 75 percents was still owned by the state and cannot be traded in the stock market. Among the 1200 and so listed companies, only a few have distributed dividends to stockholders (Lin Yixiang 1999).

in promoting the economic and political powers of developed countries, many leaders of the developing countries that achieved independence after World War II attempted to develop advanced sectors comparable to those in developed countries against their own comparative advantages,²⁰ 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). As such, enterprises in the advanced sectors were not viable in an open, free, competitive market, and government interventions on price signals, resource allocation, and market competition were required to keep 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).²²

This phenomenon also existed in some newly industrialized economies. Korea's situation serves as a good illustration. Taiwan Province of China has a higher per capita income than that of Korea. But the large enterprise groups in Korea are more technologically advanced and are more capital intensive than comparable enterprises in Taiwan Province.²³ 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 enterprises manifested themselves as being competitive and viable. The Korean economy collapsed in the East Asian Financial Crisis and had to borrow heavily from the International Monetary Fund. After the elimination of state protections and subsidies to large enterprises (in accordance with IMF conditionalities), 17 out of 30 Korean *chaebols* have now gone bankrupt, which shows that these enterprises were not viable and could not survive without government protection.

In market economies, the protective measures taken toward non-viable enterprises are similar to those in socialist economies: depress interest rates, manipulate the directions of loans dished out by banks and the financial system to provide cheap funds to non-viable enterprises, and establish various barriers to imports to prevent competition from developed countries. The surplus-earning enterprises that are consistent with economy-wide comparative advantages were discriminated against and found it hard to develop, which led to a drying up of funds that could be mobilized for development purposes. If external borrowing was ruled out, as was the case in India, Pakistan, and most socialist economies, those economies stagnated; if external borrowing by enterprises or governments was permitted, as were the cases of Latin American countries, Korea, Thailand, and Indonesia before the East Asian Financial Crisis, debt crisis ensued (Krueger, 1992).

²⁰ The view of 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).

²² India and Latin America are very typical of this. As to India, see Swanmy (1994). As to Latin America, see Cardoso and Helwege (1995).

²³ 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 automobile industry, Korea produces their cars in entirety, while Taiwan is renowned only for parts production.

When the debt crisis broke out, countries had to seek IMF support under current international financial arrangements. IMF loans are usually associated with conditionality, requiring a series of reforms and structural adjustments of 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 enterprises cease, and that corporate governance be improved. The Washington Consensus, based on Neo-classical economics, assumes that enterprises are viable. Therefore, the conditionality aims to eliminate protectionism and subsidization without any attempt to solve the enterprises’ viability problem. If non-viable enterprises constitute only a small share of the economy, as is the case in Korea or Bolivia, a shock therapy is possible and growth can quickly resume when increase in efficiency offsets the shock of bankruptcy suffered by non-viable enterprises in the wake of Washington Consensus measures. However, if non-viable enterprises constitute a large share of the economy, as is the case of 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).²⁴

Since the problem of non-viable enterprises is a common problem in socialist, transitional and developing economies, it is inappropriate to implicitly assume that enterprises are viable in the analysis of and solutions to the problems in these economies. Problems of viability should be taken explicitly into account in analyzing economic development and transition.

Upon reflections, neoclassical economics has been enriched through a process of abandoning unrealistic and implicit assumptions. The basic framework of neo-classical economics was laid down in Alfred Marshall’s “Principles of Economics” in 1890. Among others, Marshall’s framework made several implicit assumptions, including perfect information, zero transaction costs, and the viability of enterprises in an open, free, competitive market.

Economic theories are instruments for people to explain what has been observed and to predict what will happen. According to Friedman (1953), whether a theory is acceptable lies not in whether its assumptions are realistic, but in the implications drawn from the theory being consistent with empirical observations. Marshall’s framework is very powerful in explaining and predicting a number of economic phenomena—when prices of certain products increase, the purchase of those products will generally decline, for example. However, these implicit assumptions also limit the explanatory powers of Marshall’s framework on certain issues. For example, under the assumption of perfect information, there will only be one price for a product in a competitive market, allowing little room for price searching. One of the main contributions by Professor George Stigler at the University of Chicago was to abandon the implicit assumption of perfect information and to introduce the concept of incomplete information into economics with the added considerations of value of information and cost in information collection and processing. His contribution made information an important variable in modern economic analysis. Other economists, such as Joseph Stiglitz, George Akerlof, and Michael Spence, further pointed out that not only is information incomplete, it is often distributed asymmetrically among producers, consumers, and principle and agent. Furthermore, according to Marshall’s framework, resource

²⁴ The difference in the shares of non-viable enterprises 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 was small. Therefore, the share of non-viable enterprises in the economy must be relative small. Stiglitz also questioned the universal applicability of the Washington Consensus (Stiglitz, 1998), but he did not note the possible impact of non-viable enterprises on developing and transitional economies and their limitations on policy choices.

allocation by markets is most efficient. Knowing this, it is hard to explain why there are enterprises operating in accordance to non-market allocation mechanisms. Ronald Coase contributed to neoclassical economics by abandoning the zero transaction cost assumption and opening up the research of contracts, property rights, and non-market institutions.

Economic theories are like maps. A map is not the real world itself, but a tool for us to understand more about the surrounding environment and what will be seen in different directions. Maps, by nature, must be abstracted and simplified to some extent, but if some important signs are ignored or incorrect, they will mislead. And when we find out the mistakes, corrections must be made. Due to the prevalence of viability problems in planning 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 consideration that many enterprises may not be viable, transition and reform should be designed with the understanding that their success also depends on the creation of conditions that make non-viable enterprises viable, in lieu of following shock therapy and Washington Consensus reforms unconditionally.

In addition, the objectives pursued in national development must also be reoriented. Traditionally, political leaders, economists and social elite in developing countries often aimed 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 structure of factor endowments. A developing country's attempt to develop industries and technologies of the developed countries often makes enterprises in the priority sectors non-viable and lacking the ability to survive in open, free, competitive markets. Therefore, governments have to subsidize and protect these enterprises through price distortions, interventions in resource allocation, and so on. Rent seeking, soft-budget constraint, macroeconomic instability, income disparities, stagnation, and crisis often are the consequences of the government's attempt 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 endowment structure in the economy, enterprises in an open and competitive market will upgrade their industrial, product, and technological levels accordingly in order to ensure their competitiveness in the markets. 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 laborer. Capital comes from the accumulation of economic surplus. To quicken the upgrading of endowment structure, a maximum economic surplus should be produced at each period, and a large proportion of this surplus should be saved from 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, create maximum possible amount of surplus, have the highest possible returns to capital, possess the highest possible intention to accumulate capital. Consequently, the upgrading of factor endowment in the economy will be the fastest.

Enterprises' decisions are concerned with product prices and production costs, but not with the structure of factor endowments in the economy. Only when product prices can reflect the prices of international markets and the factor prices reflect the relative scarcities of various factors in the endowment structure, can enterprises automatically make the industrial, product, and

technological choices consistent 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 factor endowment structure.

At the same time, as the factor endowment structure upgrades, previously viable enterprises must upgrade their choices of industry, product, and technology accordingly in order to maintain their viability in competitive markets. The upgrading of industry, product, and technology is an innovative activity that requires enterprises to acquire information about appropriate new industries, products, and technologies. However, such information is not always complete, nor freely available, and resources allocated for the search and analysis of information can be costly. If enterprises carry out these activities individually, the tendency would be to keep the information secret, leading to redundant efforts in acquiring information. Since to a large extent information, after being collected and processed, have the nature of a public good with near zero marginal costs of dissemination, the government can help to collect information on new industries, products, and technologies and provide the information free to the enterprises in the form of an industrial policy.

The upgrading of technology and industry in an economy often requires coordination among different enterprises and sectors. For example, the requirements on skills and human capital of new industries and technologies might be different from those of old industries and technologies. An enterprise might not be able to fully internalize the supplies of all new requirements and must then rely on the help from its external environment. Besides human capital, upgrading might also require new financial institutions, trading arrangements, and marketing channels. Government's industrial policy might therefore be useful for coordinating desirable changes in various industries and sectors 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, an enterprises following the industrial policy to upgrade might still fail due to the over ambition of upgrading in the industrial policy, the small scale of new markets, and or failure in the coordination of various aspects of changes. The enterprise's failure will shed light on the inappropriateness of the industrial policy and will act as a beacon to other enterprises so that they can avoid further failure by not following the policy. That is to say, the first enterprise pays the costs for its failure and at the same time provides valuable information for other enterprises. If the first enterprise succeeds, it will induce other firms to carry out similar upgrading, thus result in the dissipation of innovation rents for the first enterprise. Therefore, the costs of failure and the benefits of success for the first enterprise are not entirely symmetric. To compensate for the possible asymmetry in costs and benefits stemming from the externalities of first enterprise's success and failure to other enterprises, the government could consider subsidies such as tax incentives or credit guarantees to those who first respond to government's industrial policy.²⁵

The above policies aim to develop a country's economy according to its particular

²⁵ Most "big push" attempts in developing countries in the 1950s and 1960s failed. However, the influential paper by Murphy, Shleifer, and Vishny (1989) re-ignited interests in this idea. Their papers show that government coordination and support might be necessary to set up strategic industries, and 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 comparative advantages in the economy, and enterprises in their various sectors must be viable after they are built up. Deviation from comparative advantages is the reason why so many "big push" attempts failed in developing countries in the 1950s and 1960s.

comparative advantages and can help developing countries to make full use of technological gaps between themselves and developed countries and accelerate its economic development through low-cost transfers of technology. This approach will help developing countries realize income, industrial, and technological convergence with developed countries (Lin, 2002). It must be noted 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 industry, product, and technology. But in the former case, the enterprises to be supported are viable, and subsidies should be of a limited amount and duration—sufficient enough to compensate for information externalities. In the latter case, the enterprises to be supported are non-viable, and, accordingly, require large and long duration of subsidies and protections from the government.²⁶

V. Viability and Economic Transition

The enterprises in heavy industries prioritized by government in traditional planned economies are not viable in open and competitive markets. The objective of the transition from a traditional planned economy is to establish open and competitive markets. In the process of transition, however, the enterprise's viability problem becomes explicit. Whether the transition will be stable and successful very much depends on how the viability problem is solved.

Since non-viable enterprises cannot survive in open and competitive markets without government subsidies, the shock therapy that aims to jump over the huge gaps between planned economies and market economies will inevitably lead to large-scale bankruptcy and unemployment, thus prompting economic collapse and social instability, which is understandably unacceptable to a functional society. Consequently, the government has to continue to subsidize the non-viable enterprises, resulting in the embarrassing situation of shock *without* therapy. China's reform is gradual with a dual track: On the one hand, the Chinese government has relaxed on their strict control on resource allocation and has allowed new entries to sectors of Chinese economy's comparative advantages. This has enhanced resource allocation efficiency, created new resources, and provided conditions for the reform of traditional sectors; On the other hand, the state has continued to provide protection and support to enterprises in traditional sectors to buffer them from the threat of bankruptcy, and at the same time created conditions for solving their viability problem. This dual track approach can maintain social and economic stability, achieve relatively high growth, and make the transition Pareto or Kaldor improvements (Lin, Cai and Li 1996).

However, the transition towards a market economy depends on a final, more definite solution to the viability problem for enterprises in the traditional sectors, otherwise the government will continue interventions into markets and the inevitable problems of such actions will ensue. For example, along with the high economic growth during China's transitional period, the share of non-performing loans looms large, the corruption is widespread, and regional income disparities are widening. To a large extent, all of these setbacks are connected to the fact that SOEs still

²⁶ In another paper, I denote the "comparative advantage following development strategies" to the government policies that help enterprises to choose industries, products and technologies according to the economy's comparative advantages. This is in contrast to the "comparative advantage defying development strategies," in which government policies encourage enterprises to choose industries, products, and technologies inconsistent with the economy's comparative advantages (Lin, 2003).

depend on government subsidies and protection to survive. After 1983, the approach adopted by the government to support SOEs changed from direct fiscal appropriation to the offering of low interest-rate loans from state-owned commercial banks. Currently, over 70% of the bank loans are lent to SOEs, but due to their poor performance, many SOEs were unable to repay the loans. Therefore, the banks accumulate large amounts of non-performing loans. To support SOEs, the government also limits market entry to private interests so that SOEs can enjoy monopolistic rents. Many SOEs (and non-SOEs) seek rents from the government to acquire more low-interest loans or licenses for market entry, thus adding fuel to the widespread of corruption. The problem of increased income disparities between regions is due to China's large size, which lends to different regions possessing different comparative advantages: the comparative advantages of eastern China lie in manufacturing, those of central China lie in agriculture, while those of China's western regions lie in minerals and natural resources. To subsidize SOEs, the government artificially depresses the prices of agricultural products and minerals. After reforms, eastern region made huge progress in manufacturing by taking advantages of their superior geographical and market conditions. Imports of low-priced agricultural and mineral products from central and western regions increased rapidly. In essence, the relatively poor central and western regions subsidized the relatively rich eastern, industrial region, thus widening inter-regional disparities. Price controls on agricultural and mineral products were also intended to support non-viable SOEs. If the viability problem of SOEs is solved, subsidization and protectionism through low-interest loans, monopolistic practices, and the depression of prices for agriculture and raw materials will see their necessary demise and the problems mentioned above can be solved (Lin, Cai and Li 2001).²⁷

How do we solve the problem of viability? My suggestion is to solve it according to four categories of SOEs: the first is mainly the defense-related enterprises whose operations, intensive in both capital and technology, run against China's comparative advantage, but without which national security cannot be ensured. For this group, direct fiscal appropriation is necessary and the government should directly monitor their production and operation. It is reasonable to expect that there are few such enterprises in this category. The second group also requires intensive capital and technological inputs, but does not revolve around sensitive, defense-related contents, and they have huge domestic markets. For these types of enterprises, we can adopt a "market for capital" approach in utilizing international funds to overcome the limitations of domestic

²⁷ Besides the viability problem, the SOEs in traditional sectors have the additional problem of social burdens inherent in transition. Before economic transition, heavy industry was the main objective of economic development, which entailed large-scale investment but provided limited employment. The state was then left responsible for urban employment, which usually led to redundant workers in SOEs and low wages that allow for only current consumption. Before the reform, all enterprise revenues were submitted to the government, and wages, pensions and other expenditures were appropriated from the state budget. Following reform, the responsibilities of wages and pensions are transferred to enterprises. Compared to newly established TVEs, joint ventures, and other non-state enterprises, the social burdens of SOEs weigh much heavier. I call the cost increase caused by the problem of viability in competitive markets a "strategic burden," and call the cost increase caused by labor redundancy and pension expenditure a "social burden." Together they can be called "policy burdens" of SOEs. The soft-budget constraint of SOEs stems from policy burdens. Therefore, to solve the problem of SOEs, it is necessary to eliminate the social burdens and solve problems of viability.

endowment structure on enterprise's viability. There are two ways to achieve this: one is to encourage domestic enterprises to go public in international capital markets; the second is to set up joint ventures with foreign companies and get direct access to foreign technologies and capital. The third category of SOEs is the ones located in capital-intensive sectors, but with a limited domestic market where a "market for capital" approach is not feasible. The only way to solve the problem of viability for this group is to make use of their engineer capacity 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 fourth group consists of non-viable enterprises that lack engineer capacity and is unable to shift their production to new markets, and these SOEs should be allowed to realize bankruptcy.

After the problems of SOE viability are solved, whether or not an enterprise can turn profits becomes a problem of management, which is determined by corporate governance and market competition, as discussed in neo-classical economics. The government will no longer be responsible for enterprise performance. Only then can the reform of institutions that are inherited from the traditional system with the functions of subsidizing and protecting SOEs be carried out thoroughly, and the transition from a planned system to a market economy be completed.

VI. Conclusion

This paper reflects on the limitations of the neo-classical theoretical framework, based on the failure of transitional policies designed according to neo-classical economics and the unexpected adverse effects of "Washington Consensus" in handling many crises in developing countries. In the existing framework of neoclassical economics, beginning with Marshall, it is implicitly assumed that a firm is viable, that is, a normally managed firm is expected to earn a socially acceptable normal profit in a free, open, and competitive market. With this implicit assumption, the focus of economic research is on the problems of corporate governance, competitive environments, and the arrangement of property rights that influence firm's management. However, many enterprises in transitional economies and developing countries are not viable because, due to the government's desire of catching up, they have entered into sectors, which are inconsistent with their economy's comparative advantages and require over capital-intensive technologies in production. In an open and competitive market, these enterprises, even with normal management, would be unable to earn acceptable profits. To set up these enterprises, the governments in these countries turn toward protection measures and subsidization of these enterprises through price distortions, limitations on market competition, and direct intervention into resource allocation. The end 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 neo-classical economic framework, when they designs policies for economic transition or crisis management, economists and governmental officials are likely to focus on improving competitive environments, property rights, corporate governance, removing government intervention into resource allocations, and so on, which impede the enterprises' normal management, and are not aware of the fact that those problems in fact are endogenous to the enterprises' viability problem. When a majority of the enterprises in an economy are non-viable, the implementation of these

reforms and transitional policies often bring about severe pains to society, leading sometimes to an awkward situation of shock without therapy. Since many enterprises in socialist planned economies, transitional economies, and developing countries are not viable, it is necessary to relax the implicit viability assumption and consider explicitly the problem of viability not only for understanding problems in socialist planned economies, transitional economies, and developing countries but also for the development of neoclassical economics itself. The explicit consideration of viability problem will also help to clarify the economic functions of governments in developing countries, preventing them from adopting comparative-advantage defying development strategies for the goal of setting up non-viable enterprises, and enabling them to achieve convergence with developed nations rapidly and steadily.

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