

I An Evaluation of the Socialist Economy

I.1 ECONOMIC SYSTEMS

This chapter first lays a foundation on which an economic system is analysed and evaluated. Subsequently, we will evaluate the performance of socialist economies in the former Soviet Union and Eastern Europe against the objectives of an economic system – namely, efficiency, macroeconomic balance and sustainability. In this analysis we will investigate the behaviour of households and firms, which interact with the socialist government, using theories and empirical evidence. This discussion will provide a framework in which to analyse the North Korean economy.

An economic system is defined as the set of institutions and mechanisms that influence the decisions and the behaviour of economic agents, typically consumers and producers (Gregory and Stuart, 2004). There are three bases of any economic system: property rights (ownership) as an institution, a coordination mechanism and the behaviour of economic actors (that is, households, firms and government). Numerous works suggest the importance of property rights and the coordination mechanism in determining economic performance (e.g. North, 1990, 2005; Greif, 2006; Acemoglu and Robinson, 2012; Acemoglu et al., 2001, 2002). Households and firms are expected to behave in accordance with the rules of ownership and the coordination mechanism.

The history of economic systems is as long as the history of human beings, since human beings require the production and consumption of goods and services for their physical survival. Even a primitive society must have some norms that work as economic institutions: a village that relies on animal hunting will have social

norms or traditions that govern which animals to hunt, which tools to use and how to distribute food and materials from killed animals. As the populations increased and the markets expanded, it became difficult to rely on a simple rule or on decisions made by a person, such as a village chief, to manage all of the problems related to the production and consumption of goods and services. Furthermore, the division of labour required that every human being rely on the goods and services produced by others. Accordingly, the institutions and mechanisms that constitute economic systems have gradually become more complex. Several questions arose with these developments, including how to increase production, how to maintain supply equal to demand and how to distribute produced goods and services to consumers.

The modern academic debate on economic systems started with Adam Smith's *The Wealth of Nations*, published in 1776. Instead of creating or envisioning an ideal economic system, Adam Smith described an economic system emerging in reality, which he called 'the system of natural order' or 'the system of perfect liberty', and provided economic justification for it. One of the primary reasons that Adam Smith's book was so influential was that it successfully addressed critical concerns of seventeenth- and eighteenth-century scholars. They were concerned that individuals freed from medieval rules would pursue their unfettered self-interests, leading to societal collapse. Before Adam Smith, scholars had responded to this problem in two ways: (1) by calling for altruism and (2) by suggesting the need for an absolute power. The former argument said that altruism should be emphasised to prevent economic development from destabilising the society. The latter maintained that each person should voluntarily delegate his rights to a strong central authority to avoid a 'war of all against all'.

Adam Smith rejected both claims. In his books, he argued that the individual pursuit of self-interest would lead not to collapse but to the welfare of the society. He distinguished self-interest as the love of oneself without causing harm to others as a result of one's selfishness.

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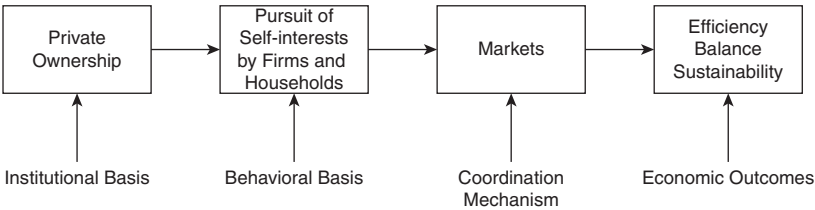


FIGURE I.1 The Capitalist Economic System

He illustrated self-interest with this frequently cited sentence: ‘It is not from the benevolence of the butcher, the brewer, or the baker, that we can expect our dinner, but from their regard to their own interest’ (Smith, 1976, I, ii, 2).¹ Those people pursue their self-interest, but their gain neither reduces others’ property nor harms their bodies. According to Adam Smith, this self-interest generates economic growth through an ‘invisible hand’. ‘By directing that industry in such a manner as its produce may be of greatest value, he intends only his own gain, and he is in this, as in many other cases, led by an invisible hand to promote an end which was no part of his intention’ (Smith, 1976, IV, 2, 9).

The economic system described by Adam Smith can be summarised in Figure I.1, which shows that capitalism rests on three bases: private ownership as the institutional basis, the individual’s free pursuit of self-interest as the behavioural basis and the market mechanism as the coordination basis. Ownership of productive assets such as land, housing and firms defines an economy’s main institutional features. For instance, a constitution, laws and the court system operate to protect property rights. The coordination mechanism concerns how to allocate resources. In a capitalist economic system, a market mechanism – a so-called ‘invisible hand’ – guides economic actors to rationally behave in accordance with market signals. The behavioural basis refers to the behaviour of economic actors. Households maximise utility and firms profit, whereas government’s main role is to provide public goods. In other words, the pursuit of self-interest is widely accepted as capitalism’s behavioural basis. These

three bases are regarded as a package because without the others, any one would not properly function. Private ownership motivates economic agents to pursue their self-interest. The pursuit of economic agents' self-interest is coordinated by the market mechanism in a way that achieves socially desirable outcomes, such as economic growth and market clearing (an equilibrium of supply and demand).

Socialism contrasts with capitalism in terms of these bases. Karl Marx believed that capitalism was 'the root of all evil'. According to Marx, capitalism leads to class struggle, income inequality, unemployment and business cycles. Given the existence of private ownership of productive assets such as capital and land, class struggle is inevitable, he said, because capitalists exploit a surplus of potential workers' labour. Central planning as the coordination mechanism, he wrote, can be designed to maximise both economic growth and social fairness; if economic agents follow instructions provided through central planning, then central-planning goals will be accomplished. In socialism, therefore, economic agents' behaviour in accordance with instructions set by a central planning mechanism serves as a substitute for the free pursuit of self-interest found in capitalism.

Figure 1.2 shows the structure of the socialist economic system. The three bases are different from those of capitalism. The market mechanism is replaced by central planning. Instead of an individual pursuing his or her self-interest, he or she must follow instructions given by central planning and designed to achieve socially desirable outcomes. State or public ownership enables the state to use resources in accordance with the decisions it makes based on central planning.

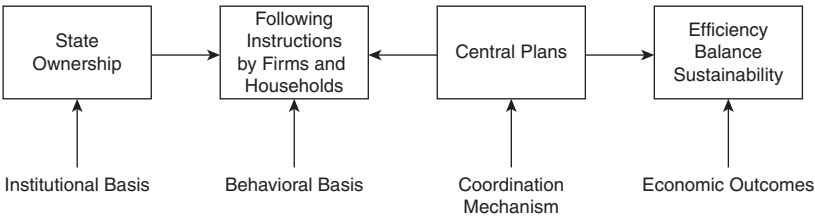


FIGURE 1.2 The Socialist Economic System

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It is noteworthy that there is another difference between capitalism and socialism: central planning is the initiator of economic decision-making in socialism, as the arrow in Figure 1.2 suggests, whereas in capitalism, individuals initiate decision-making, and markets, as the coordination mechanism, work according to the decisions made by individuals.

Socialism was a grand-scale experiment of an economic alternative to capitalism. Adam Smith described and justified capitalism as a system that had already been put in motion, but Karl Marx designed and initiated implementation of the ideal of socialism. In this sense, the former was based on the natural evolution of society, whereas the latter was based on human design. Unlike capitalism, however, socialism did not last for long. The Soviet economy experimented with socialism from 1918 to 1991, but eventually failed. The failure of this experiment after fewer than 80 years implies that the system had fatal flaws. We next discuss what those flaws were and how they occurred.

Both capitalism and socialism attempt to achieve socially desirable economic outcomes. In other words, the objectives are nearly the same in both economic systems. An ideal economic system should function to maximise efficiency and maintain a macroeconomic balance between supply and demand. Furthermore, it should be sustainable for a sufficiently long period. A more efficient economic system has the ability to produce more output using the same quantity of inputs or the same quantity of output using fewer inputs than an alternative economic system, suggesting higher long-run economic growth rates. The existence of permanent aggregate shortages is undesirable: It causes long queues, an underground economy and reduced incentives to work. The permanent oversupply of goods and services is not desirable, either, because it results in the waste of valuable resources. Finally, an economic system that is doomed to collapse after a short period of time cannot be considered desirable and, if possible, it should not be adopted. Hence, we evaluate the performance of the former socialist countries using the three criteria suggested earlier: (1) the efficiency of the former socialist countries, particularly

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the former Soviet Union; (2) chronic shortages of consumer goods; and (3) the sustainability of the socialist economic system.

The next section of this chapter begins with a discussion on the performance of the socialist economy, including the growth rates, extent of inefficiencies and shortage of consumer goods. Sections 1.3 and 1.4 focus on the behaviour of economic agents, that is, households and firms. Section 1.5 discusses studies on the causes of the collapse of the socialist economies, particularly that of the Soviet economy. Five theories or hypotheses are presented and evaluated. At the end of the chapter we will discuss the implications of socialist reforms for the stability of the regime.

I.2 THE PERFORMANCE OF THE SOCIALIST ECONOMY

1.2.a Growth Performance

To understand the performance of former socialist economies (FSEs), one must look at growth statistics. However, the reliability of growth statistics on FSEs is limited. Official statistics appear to have several faults: hidden inflation, over-reporting of output and exaggeration of quality improvements. Unofficial estimates are not perfect either, suffering as they do from data deficiencies on prices, quality and volume of outputs. Thus, the cautious approach is to compare all available statistics and understand the lower and upper limits of growth rates. We concentrate on growth statistics for the Soviet economy because more data are available in that area and previous studies have concentrated on the growth of that economy.

An economy's growth can be attributed to two sources: (1) the expansion of inputs such as capital and labour and (2) the better use of given inputs. Growth based on the expansion of inputs is called 'extensive growth', whereas growth based on the better use of inputs refers to 'intensive growth'. Accordingly, growth rates can be divided into one part accounted for by more inputs and another part accounted for by better use of inputs. By subtracting the growth rates of employment and capital from the growth rates of output, one can obtain

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labour productivity and capital productivity, respectively. Total factor productivity, which is a measure of better use of inputs or efficiency, is computed by subtracting the growth of employment and capital combined from the growth rates.

There are three different estimates of Soviet GDP: official Soviet statistics, the Central Intelligence Agency (CIA) and Bergson's estimates and Khanin's estimates. There are large discrepancies among these estimates. According to the Soviet official statistical office, Soviet economic growth was astonishingly high, amounting to 8.8 per cent per annum during 1928–1985. In contrast, CIA and Bergson estimate annual growth in the same period as 4.3 per cent (Bergson, 1961; CIA, 1991). Khanin, a Russian economist, provides the lowest estimates among the three alternatives: according to him, the Soviet economy grew by 3.33 per cent per annum from 1928 to 1985 (Khanin and Selyunin, 1987; Khanin, 1991; Harrison, 1993). According to the CIA/Bergson estimates, the Soviet economy was approximately two-thirds of the size of the US economy in the late 1980s, assuming that Soviet real national income in 1929 was approximately 20 per cent of the US level. However, Khanin suggests that the Soviet economy was only approximately one-third the size of the economy of the United States in the late 1980s.

These discrepancies result from the different methods used to estimate prices and the volume of output. First, the CIA/Bergson and Khanin methods take into account 'hidden inflation'. These estimates assume that the official Soviet price statistics underestimate actual increases in prices. For example, new products were likely to be introduced at disproportionately high prices that were not fully reflected in the official price index. Second, it was possible for firm managers to overstate quality improvements. Consequently, price increases, at least in part, exceeded what could be justified on the basis of quality improvements. Third, output figures may have been exaggerated. In other words, Soviet firms had an interest in over-reporting their outputs. The CIA questioned the reliability of price and quality improvement data but accepted output statistics given in physical units. Khanin, however, was suspicious of all of those

statistics and developed his own methodology for estimation based on both physical and indirect measures of output. Ericson (1990) criticised Khanin's method, asserting that the Khanin estimate represents the extremely low bound because hoarding – which might be difficult to determine in the sample of products on which Khanin based his estimation – increased over time, and Khanin's assumption that labour productivity in the USSR was the same as that in the US twenty years earlier might have underestimated physical outputs.

We use the CIA/Bergson estimates unless stated otherwise, in spite of some criticisms.² They are the most reasonable estimates, both because of the methodology used and because they fall midway between the upper and lower bounds.

According to CIA estimates, the Soviet economy grew by 3.5 per cent from 1950 to 1990 (CIA, 1991). Average annual growth rates of the United States and the European countries belonging to the Organisation for Economic Co-operation and Development (OECD) recorded for the same period were 3.2 and 3.7 per cent, respectively. That is, the Soviet growth rate during this period was slightly higher than that of the US, but lower than that of the European OECD countries. However, given the larger capital stock per capita in the US and European OECD, the Soviet growth rates would be expected to be higher than those of the other countries. All of this leads us to conclude that Soviet economic growth was not impressive during this period.

Another interesting and important feature is that Soviet growth was slightly faster than that of Western industrialised countries from 1950 to 1970. More specifically, annual growth rates for the Soviet economy were estimated at 5.2 and 4.8 per cent in the 1950s and the 1960s, respectively, while European OECD countries grew by 5.1 and 4.4 per cent during those same periods. This trend, however, reversed after the 1970s, and the deterioration in economic growth intensified over time until the Soviet economy disintegrated. The Soviet average annual growth rate declined from 2.4 per cent in the 1970s to 1.7 per cent in the first half of the 1980s, and fell further to 1.3 per cent in the second half of the 1980s.

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The trend of deterioration in growth following a rapid increase is found in other Eastern European economies (Kornai, 1992). For example, Czechoslovakia grew by 4.7 per cent (2.8 per cent)³ per annum during 1971–1980, according to official net material product statistics. However, the growth rate declined to 1.7 per cent (1.2 per cent) from 1981 to 1985. The same pattern is found in Poland: the Polish annual growth rate from 1971 to 1980 was 5.3 per cent (3.6 per cent), but it was only 0.1 per cent (0.6 per cent) from 1981 to 1985. The Hungarian growth rate decreased from 4.7 per cent (2.6 per cent) in 1971–1980 to 1.8 per cent (0.7 per cent) in 1981–1985.

What was the source of this downward trend in growth rates for former socialist countries? Very low efficiency lies at the heart of the problem. Comparison of the productivity of the Soviet Union and the United Kingdom shows that factor productivity of the former was lower than that of the latter. The average British factor productivity, which had been modest among the Western European economies, was 1.6 per cent from 1950 to 1990 (Crafts and Toniolo, 1996), whereas the average Soviet factor productivity during the same period was 0.2 per cent, just 12.5 per cent of the British level (Schroeder, 1997). In other words, the Soviet economic system was less efficient than capitalist countries; it had to utilise more inputs to achieve the rates of economic growth achieved by an advanced market economy. This was true not only in the period after the 1970s, when the Soviet economy began to deteriorate, but also in the period of the 1950s, which can be considered the ‘Soviet golden age’ in terms of growth performance. Moreover, the Soviet factor productivity became negative from the 1970s to the economy’s demise, suggesting that the level of inefficiencies intensified over time.

1.2.b Inefficiencies

To what extent were FSEs less efficient than comparable capitalist countries? Bergson (1987) assessed the efficiency level of seven capitalist countries and four socialist countries (the Soviet Union, Poland, Hungary, Yugoslavia). Bergson estimated a modified Cobb-Douglas

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function, which includes an economic-system dummy, that is, socialism and capitalism, using data for 1975. He found that the four socialist economies were 25 to 34 per cent less efficient in 1975 than were advanced market economies in the same year. The magnitude in the gap depends on whether one controls for the skill level. This suggests that a country's GDP decreases by at least one-fourth when it adopts socialism instead of capitalism, although capital, land, the number of workers and skill are the same as they were before adoption. In his later article, taking possible overestimation of outputs and capital into account, Bergson (1992) revised his estimates and suggested that the productivity shortfall of FSEs relative to market economies would reach approximately 40 per cent.

The cause of this inefficiency in socialist economies is the matter of an old debate between Oskar Lange and the Austrian school of economics. The Austrian school of economics, represented by von Mises and Hayek, argued that a socialist economy is intrinsically inefficient. It argued that information about the value of resources requires private ownership and markets, without which the efficient allocation of resources would not be feasible. Private ownership motivates economic agents to evaluate the value of goods and services. Markets collect such evaluations from many agents, and as a result the economic scarcity of resources is reflected in prices found in markets. Because socialism lacks private ownership and the price mechanism, the argument goes, it cannot allocate resources efficiently.

Oskar Lange refuted this argument and claimed that socialism was able to mimic the price mechanism through 'trial and error'. His idea is explained in a model developed by Heal (1969). Lange argued that central planning can be optimal in that planners can allocate inputs in the most efficient manner. Assume that central planners maximise social welfare subject to an input constraint. One simple example involves maximising the sum of two outputs produced by two firms. The two firms use the same input, so the quantity of input used by either firm is flexible, subject to the fixed quantity of total input. Next, the central planner requests information on marginal