Part I

Collapse of the Socialist Economic System and Transition to the Market Economy
Chapter 1
Collapse of the Socialist Economic System

1 Introduction

The snow-slide collapse of the socialist system in central and eastern European countries in 1989 and the lapse of Soviet Union at the end of 1991 have dramatically changed the characteristics of the study field of “comparative economic systems”.

Comparative economic systems by that time classified economic systems into market and centrally controlled (socialist) economic systems, and mainly tried to analyze the features of the latter. But when the socialist systems collapsed in Central and Eastern European countries and Soviet Union, and China adopted the line of marketization under the name of “socialist market economy”, merits of the study have also disappeared.

In this chapter, we will identify what the traditional comparative economic systems has been, by looking back debates around problems that the socialist economic system entailed and measures socialist countries adopted to overcome them, and by outlining why the socialist economic system had to collapse.

Shortage of Information Disposal Capability by Central Planning Agencies

The centralized socialist economic system, that was generally called the Stalinist system, was formed in the former USSR in 1930s, and was transplanted into the central and eastern European countries and China that became socialist countries after the Second World War. It seemed to operate successfully when people found that socialist countries recorded high economic growth rates in 1950s. But the economic growth rates became lower since the beginning of 1960s, and the successful operation of the centralized socialist economic system came into question. In those days, the basic limit of the centralized socialist economic system was thought to be in shortage of capability of central planning agencies to dispose information.

This point was discussed in the socialist economic calculation debate in 1930s. Here we will discuss the point by thinking about the “material balance method” used for drawing up plans in the socialist countries. The central planning agencies tried to attain material balance between demand and supply for each of about 2,000 main materials, by making next information exchanges through the ladder of communist party-Gosplan-ministries-departments-enterprises.

(1) Communist party and Gosplan set production targets for main materials for the next year, based on the past results.
(2) These production targets were presented to related industrial ministries as “control figures”, and the ministries transmitted the differentiated control figures to enterprises.

(3) Enterprises answered demand of the materials necessary for attaining the production targets (control figures) to industrial ministries, and ministries, in turn, transmitted material demand to Gosplan.

(4) Gosplan, based on the information, checked demand (intermediate demand plus final demand) and supply of each basic material. If demand and supply was not equated, Gosplan set renewed production targets, and transmitted them to enterprises through industrial ministries.

(5) When demand and supply was equal for all materials after repeating the procedures, the final production plan was drawn up, and differentiated plans were transmitted to enterprises through ministries.

The procedure ends if demand and supply balances for all goods, but this ideal case never happen. The reason is that infinite times are necessary in order to converge the procedure, but in reality the central planning agencies do not have enough time to repeat the process infinitely. For example, in 1960s, the process of drawing up the plan began in February or March, and by June material balances for most important goods. In September distribution plans for basic materials were to be formulated. But during the period, only one round or at most two rounds of information exchange occurred between Gosplan and enterprises. Therefore, convergence of the procedure could not be expected, and measures to equate demand to supply, for example, by curtailing demand of non-priority sectors, were adopted.

The basic reason why balance between demand and supply could not be expected by the material balance method is that it needs much more information than the market economic system needs. Let the number of goods be n, and the number of enterprises be s. The market economic system needs to send price information of n goods and to receive net demand information (demand minus supply) of n goods, because markets do no need to identify to which or from which enterprises the information is send. On the other hand, the central planning agencies have to send and receive the information of 2ns, because they need not only to identify to which and from which enterprises the information is send, but also to differentiate demand and supply information. The central planning agencies could not have a capacity to communicate and dispose such a huge volume of information.

Still, the story must be more complicate when goods cannot be clearly defined. If there are white T-shirts that were printed with X and Y, and these T-shirts are defined as different goods, then the number of goods increases indefinitely. Therefore, the number of goods has to be small in order that the material balance method should operate effectively. In other words, the more diversified the demand become and the more information the economy needs to dispose,

2. Strictly speaking, the information volume can be reduced to n-1, because price of some good
the less the material balance method operates effectively.

Moreover, in order that the material balance method should operate effectively, incentive problems must be resolved. It is well known that in the former Soviet Union, at least until the 1965 reform, plans were formulated in material terms, and incentive incompatibility problems repeatedly appeared.

Measures to remedy these problems of the centralized socialist economic system were proposed, one of which is known as the “functional model of socialism” by W. Brus. The model is one of the decentralized socialist economic system, based on the “competitive socialist economic model” that O. Lange proposed during the economic calculation debate in 1930s. The basic idea of the model is that the centralized socialist economic system could not operate effectively because of the shortage of the effective centralized decision making capacity, although the socialist economy itself is desirable in the sense that the state could set the desirable orientation in the economic life. Therefor, the model supposed that the socialist economic system could operate effectively if the centralized decision making power were delegated (decentralized) to enterprise levels.

At first, Brus classified the decision making in the economy:

(1) basic macro-economic decision making.
(2) decision making related with consumption structures of individuals for the given income, and choice of occupations and working places.
(3) other “current economic decision making” of individual enterprises, which concerns with production scale and mix, outlays scale and structure, production markets and material supply, small scale investment, details of workers’ earnings and so on.

The first decision making is a set of decisions concerning with basic balance of the macro-economy, that is, of (i) decisions about general accumulation and investment rates choosing the growth tempos of the economy, (ii) decisions about proportions of investment funds between individual sectors, (iii) decisions how to divide consumption funds between communal and individual consumption, and (iv) decisions to harmonize the current production structures with the national income distribution structures. Brus emphasized that ‘the market economic system is not suitable for shaping the basic line of economic development, i.e., choices concerning the general, especially long-term, investment’, and confirmed that, as far as the economy is a socialist economy, the first decision making is made directly at the central level. And he also confirmed that the second decision making is usually (except for unusual times) decentralized, i.e., through the market. Therefore, he concluded that the line between

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3 Lange(1938).
centralized market economic system and Brus model should be drawn according to the criterion of whether the third decision making is centralized or decentralized.

In Brus model, enterprises make current economic decisions in order to maximize profits, based on the first decisions made by the central planning agency. At that time, the central planning agency influences the decision making by enterprises through imposing various parameters of deduction for depreciation, short-term interest rates, investment credits, prices of goods, wages, payments to the budget and so on. And, in order that the profitability principle should work, the economic system should be modified into one where demand and supply decide prices through the market mechanism, i.e., prices play an active role.

Brus thought that, through decentralizing decision making and using the market mechanism, the socialist economic system could achieve not only the advantages of the planned economic management with deliberating public benefits, but also next advantages of the market mechanism:

- it could raise the flexibility of adjustment of supply structure to demand structure.
- it could use input materials more effectively.
- it could guarantee the balanced growth in the re-production process.
- it could ensure the necessary conditions for planning activities at the center level.
- it could improve the creativity at the public level.

Based on this Brus model, Hungary introduced the New Economic Mechanism (NEM) in 1968, and proceeded with more decentralized economic reforms with occasional retreats. Also in the former Soviet Union, in order to remedy too centralized planning mechanism in the physical term, the economic reform (Kosygin reform), though not inspired by the Brus model, was introduced in 1965 to curtail the number of planning norms and to improve the material incentive system.

3 Theory of the Collapse of the Socialist Economic System (2):

Soft Budget Constraints

As was discussed in the previous section, the discussions concerning the problems of the socialist economic system were focused mainly on the capability of the central planning agencies to dispose information. And these problems were thought to be resolved, if the centralized planning system could have been changed to the decentralized one.

But the economic performance of the socialist countries did not become better at all, and the difference of the performance between these countries and the advanced market economies became steadily wider. At that time, J. Kornai invented the concept “soft budget constraints”,

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showing that the economic efficiency in the socialist economic system was low by nature. In this section, we will pick up his points, and discuss how his points are related with the collapse of the socialist economic system.

Enterprises under the market economic system operate under the hard budget constraints, in the sense that they have to decide their expenditure patterns within the limits of their revenues, or they cannot produce goods more than they think they can sell. Of course, they can temporarily expense beyond their revenues if they can receive credit. But even in that case, we can say they operate under the hard budget constraints, for they have to be penalized of bankruptcy unless they cannot repay the credit.

On the other hand, enterprises under the socialist economic system could expense beyond their revenues (soft budget constraints). And they tried to acquire inputs as much as they could, with the result that the demand could not be saturated (excess demand economy). Budget of enterprises goes into soft for the next five conditions. If at least one of the conditions is satisfied, their budget digresses from the hardness, and the more conditions they satisfy, the softer their budget become\(^8\).

1. The majority of firms are not price-takers but price-makers (prices are not exogenous for most firms).
2. The tax system is soft in the senses that:
   i. the formulation of tax rules is influenced by the firm,
   ii. the firm may be granted exemption or postponement as an individual favor,
   iii. taxes are not collected strictly.
3. The firm can get free grants in the forms of,
   i. contribution to investment expenditures, without repayment obligations,
   ii. permanent subsidies paid continuously in compensation for a lasting loss or to encourage some activity over a long period,
   iii. \textit{ad hoc} nonrecurrent subsidies to countbalance an occasional loss or to encourage a special activity.
4. The credit system is soft in the sense that,
   i. the firm is granted credit even if there is no full guarantee of its ability to repay it on schedule from its proceeds from sales,
   ii. the firm is permitted to fail to fulfill its payment obligations undertaken in th credit agreement.
5. External financial investment is curried out at soft conditions.

When the budget constraints are soft, enterprises, counting on \textit{ex post} relieves from the government based on paternalism, draw up outlay plans incompatible with their financial positions and try to acquire inputs as much as possible. In these circumstances, excess demand economy or “shortage” economy is realized. Furthermore, the shortage economy is reproduced

through the next process.

When the economy is an excess demand one, in the short run the central planning agency tries to do away with the shortage, in the centralized system by imposing enterprises, and in the decentralized system by putting unofficial pressures upon enterprises, to produce more. And, in the long run, it provides enterprises with investment funds without enough deliberation on the profitability of the investment projects\(^9\).

In this way, by using the key word “soft” economy, Kornai showed the doom of the socialist enterprises to operate inefficiently, putting the production plans which do not consider the financial positions, and holding excessive production facilities and unnecessary production inputs. That is, the socialist economic system must be inefficient, because the enterprises operate without facing the discipline of bankruptcy or insolvency.

The fact that the enterprises do not face bankruptcy or insolvency is supported not only by the planning agencies’ and enterprises’ orientation towards growth, but also by the ideology of the socialism. The image of the socialism by Marx was a reflection of his understanding of the market economy in 19th century, where a large scale of workers were dismissed and spent misery lives in the recession time, whereas capitalists lived in affluence. Therefore, the socialist economic system set abolition of the capitalist class, protection of the labor class and above all eradication of unemployment as its task. And to eradicate unemployment, was adopted the policy for bankruptcy avoidance.

In 1980s he “economics of shortage” or “soft budget constraints” became a kind of doctrine to scholars, politicians and bureaucrats dealing with the reforms in the socialist countries. And based on the doctrine, economic reforms were experimented in 1980s. We will review the Perestroika from this viewpoint.

It was after 1987 when Gorbachev introduced the Perestroika policy that the concept of “soft budget constraints” was clearly paid attention, and the new “State Enterprise Law” adopted in that year was the result\(^10\). The “State Enterprise Law” emphasized “perfect economic calculation” and “self-finance” as the principles related with the soft budget constraints.

These two principles meant that the state enterprises should cover all the expenses of material outlay, labor remuneration, and payment to budget and banks from the revenue of the products sale, excluding the centralized finance for the state approved investment, and that the residual forms various funds like the production development fund. In other words, they meant that, the state enterprises could not count on subsidies, though the residual profits could not be taken away nor redistributed. Of course the economic calculation (self-supporting accounting) principle had been repeatedly given consideration. But Gorbachev, being influenced by the concept of soft budget constraints that at last reached to the Soviet Union, professed his intention to harden budget constraints of the state enterprises, by changing the name to “Perfect Economic Calculation”, and by adding the term “Self-finance”.

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But imposing these principles did not guarantee hardening of budget constraints of the state enterprises. For that purpose, another discipline had to be imposed that enterprises should be closed when they had a deficit and could not keep operating. Unfortunately, the bankruptcy law was not established nor enforced in the former Soviet Union, and it was not until 1992, after the collapse of the Soviet Union, that the law was established in Russia.

Even in Hungary the bankruptcy law, the enterprise rehabilitation law and the unemployment relieve law were prepared only in 1986, and in name. It was much unexceptional that the state enterprises were bankrupted according to the law.

Socialist state-owned enterprises did not face the hard budget constraints discipline at all before 1989 or 1991 when the socialist system collapsed.

Lack of Capital Markets and Establishment of Enterprises by the State

As was discussed in the last section, socialist state-owned enterprises under the soft budget constraints did not operate efficiently, for not facing the economic discipline of bankruptcy and insolvency. But there could be another reason why the socialist economic system in the central and eastern European countries and former Soviet Union collapsed in 1989 or 1991. We may assume the socialist economic system, where production measures were nationalized, could not ensure the long-term economic dynamics, because rights to establish enterprises and to select development projects were basically in the hands of the state.

The basic assumptions of Lange and Brus models were that the central planning agency could have the appropriate social welfare function and make appropriate distribution of the national income. But, as we will show, the socialist economic system, where only enterprises or projects that the state judged appropriate were established or invested, was difficult to secure long-term economic dynamics, different from the market economic system. In the latter system, existing and new enterprises put investment projects, which they themselves judge appropriate, into effect by their own funds and financial capitals they gather through financial and capital markets. Of course, the point was noticed even in 1970s, and in some central and eastern European countries like Hungary admitted establishment of private enterprises. However, the right remained small scale, blocked by the socialist economic system principles of state ownership of production measures and prohibition of private employment.

The argument was clearly presented by Brus himself who invented “socialist functional model” and contributed to decentralization in the socialist economic system. Looking back upon NEM where Brus model was put into practice, he stated as follows.

11 Kornai noticed this point, and tried to discuss it under the concept of “shortage economics”. But his discussion could consider only investment mechanism of existing enterprises, and it could not treat with establishment of new enterprises. Kornai(1980), pp.217-233.
The elimination of the capital market from the blueprint (of NEM) is apparently to be blamed in the first place for the fact that the role of market-type institutions within the state sector has been reduce mostly to that of a new form of bureaucratic coordination.

In this way Brus showed that NEM or Brus model, although it decentralized current decisions of enterprises, could not raise the economic efficiency, because macroeconomic decisions including key investment projects remained in the hands of the centralized planning agency and it still lacked capital markets. Next, we will think of the problems of lack of capital markets or centralization of enterprise establishment from the viewpoint of problems of scientific-technical development in the socialist countries.

The socialist countries had noticed problems of extensive development since 1960s, and, as we saw in the last section, intensive development with technology progresses became an aim. However, intensive development could not be realized, resulting expansion of technology gap with the advanced capitalist countries after the oil shocks in 1970s. The advanced capitalist countries not only advanced in energy conservation technologies but also in highly information-oriented and high value added technologies with the technological progress of computers and semi-conductors. On the other hand, the former Soviet Union, as one of biggest energy resources and raw materials producing and exporting countries, could earn an immense of hard currencies. And central and eastern European countries also could enjoy benefits from importing relatively cheaper energy resources and raw materials from the Soviet Union. Therefore, these countries had no incentives to advance energy conservation and highly information-oriented technologies, and continued using conventional technologies.

Of course, leaders of the socialist countries did not neglect these delays in technological progress. They tried to advance technologies, for example, through establishing new scientific technological organizations like scientific production associations and inter-branch scientific technological complexes, and through importing technologies from advanced capitalist countries. But these measures could not produce enough results in technological progress, because they were system preserving measures without any big changes in ownership relations or roles of central planning agencies. These countries could not keep pace with the wave of highly information-oriented societies. Consequently, citizens, especially of central and eastern European countries, disgusted with their technically delayed societies, decided to give up socialist system, and the snow-slide collapse of the socialist economic system occurred between 1989 and 1991.

No doubt former socialist countries exhibited a high degree of their achievement in the field of, for example, strategic weapons. But, “It is not so much that the government could not organize and direct R&D\(^\text{13}\).” Let think about this point again from the viewpoint of economic calculation debate in 1930s.

The main issue of the debate was whether rational economic calculation could be

\(^{13}\text{Stiglitz(1994), p.151.}\)
possible in the economy without a market. Mises, von Hayek and so on asserted that in the socialist economic system resource distribution based on the rational economic calculation could not be possible, or that it could not be in reality possible, even though theoretically possible. To refute their assertion, Lange designed “competitive socialist economic model” that incorporated tatonnement process. At this point, the main issue was whether a rational equilibrium in the static term could be attainable in the socialist economic system.

![Fig.1-1](image_url)

However, as Lange admitted\(^\text{14}\), the decision of the accumulation rate by the central planning agency to shift the production possibility curve from \(y\) to \(y'\) in Fig. 1-1 might be arbitrary. In other words, there is no guarantee that the production possibility curve given to an enterprise is rational. In order that the central planning agency organizes and guides R&D, it at first has to perceive the right direction of future technological progress. Next, it has to ensure that new products should be produced in accordance with the perceived technological development. Moreover, it has to invest capital in the necessary fields within the limits of the budget, and keep watch whether the projects were executed subject to the plan.

Relating with the problem of central planning agency’s ability to perceive the right direction of future technological progress, the ability to collect all the necessary and right information is a first problem. The central planning agency itself is an organization for coordinating plans, not for technological development. So it has to collect the necessary information from R&D institutions as the supplier of technology, or from usual enterprises as the organizations demanding technology. But there is no guarantee that these organizations provide the central planning agency with the necessary information. For example, under the soft budget constraint, institutions or enterprises developing technology might provide the central planning agency with only the information profitable for them, to sustain their growth.

There is also no guarantee that the central planning agency could screen the transmitted information properly. At first, there are barriers between ministries and departments. Ministries and departments wish to submit only the information profitable for them to the upper

\(^{14}\) Lange(1938), p.108.
organizations. So technological development beyond the barriers is difficult to conduct. Furthermore, it is difficult to expect development with truly innovative measures, because bureaucratic organizations generally wish to expand with conservative or status quo preserving measures. We can say that the possibility of the central planning agency to perceive the right direction of future technological progress is very low.

Finally, even if the central planning agencies could perceive the right direction, it might be very difficult for them to forecast concretely what kind of new products would be developed. For example, even if they could forecast that the capacity of semi-conductors will be doubled every four years, it might be nearly impossible for them to project to which new products these semi-conductors should be incorporated. Especially in the bureaucratic organizations, spiral technological developments through the exchange of responses between technology supply and demand enterprises could not be expected.

We will once again think about the reason why the central planning agencies could not resolve these problems from the viewpoint of incentive problems. First, the central planning agencies do not make investment decisions for their own money. When some project begins to operate, the planners who evaluated the profitability of the project may not be any more in the positions responsible for the profitability, because they may retire or move to other positions. Subsequently they can proceed with the project without deliberate calculation of future profitability.

If the central planning agency does not have enough responsibility for the project, in order to give it incentives to find and adopt truly prospective projects, it as an administrative organ has to be properly monitored by the legislative organ (the national assembly) or the communist party. First, as to the legislative organ, the Federal Soviet and the National Soviet opened their annual sessions for only a few days in a year to unanimously adopt the laws prepared by the central planning agency and the communist party. Therefore, we do not need to speak at length about their nominal status. They have no authority to monitor the central planning agency. On the other hand, as to the communist party, its lowest level does not have any functions to initiate policies because of the democratic centralization principle, and only its central organ has it. Certainly the central organ of the communist party has its own organization similar to the central planning agency and could have the capability to monitor it. And, the communist party with the Secretary as the center tried to do it. Nonetheless, those who supply it with the necessary information were central planning agency, ministries and departments. So there is no guarantee that the central organ of the communist party could make right decisions after acquiring the necessary information, for the same reason the central planning agency could not do it.

In general, the decentralized socialist economic model proposed by Lange and Brus could not be easily functioned, because the communist party had maintained one-party

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15 Even in the Soviet military branches to which the highest priority was given, most armament development were done in the conservative measures. See Ebata(1995).
dictatorship and had not received enough monitoring from the people. And, when the centralized planning agency made a wrong decision, it could damage the long-term economic efficiency, because of the lack of policy correction mechanism through the monitoring by the people. Therefore, even in the Brus model premising knowledge sharing throughout the centralized planning agency and the communist party, it would be very much difficult for the centralized planning agency to make strategic decisions with some distance from the current decision making.

In order to resolve these problems, it would be necessary to decentralize the basic macroeconomic decisions and establishment of enterprise as well as the decisions related with current operations of enterprises, and to establish a mechanism where economic agents who poses the entrepreneurship could acquire enough fund to establish new enterprises or to enlarge existing ones through the capital market. How can we call the mechanism with decentralizing most of economic decisions and with renouncing the state ownership of production measures the socialist economic mechanism? Therefore, we can summarize that the socialist economic system have doomed to collapse and give in to the (re-)marketization when the centralized planning agencies became incompetent in making appropriate strategic decision making.

5. Conclusions

In this chapter, we looked back the discussions and the reality around the economic reforms in the former socialist countries. We found that, to really vitalize the socialist economy, not only the moves to the decentralization in 1960s and to harden the budget constraints in 1980s, but also the moves to take away the right of enterprise establishment from the central planning agency and to establish the capital market were necessary. The economic system, where economic decisions on current enterprise operation and main investment are taken away from the central planning agency and the capital market is established, is far from the socialist, but is very close to the market economic system.

Of course, we don’t want to say the economic reason is the only reason for the collapse of the socialist system. Rather the political reason might be stronger. We don’t want to say the socialist system should collapse in 1989-91, either. But we should repeat that the socialist system doomed to be renounced and to be given way to the market economic system. And the good opportunity appeared in the end of 1980s when the energy conservation and the information revolution progressed.

Saying the result in advance, the tasks imposed to the countries in transition, after attaining the urgent macroeconomic stabilization, must be how to establish macroeconomic management system, enterprise management system and financial system enough flexible to become the highly information-oriented and multi-media societies as soon as possible.