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SOCIAL OVERHEAD CAPITAL AND PUBLIC FINANCE

By Jun IKEGAMI*

Preface

Most of the various concerning public finance of the so-called social overhead capital are found so far to have been directed principally to clarify the concept of either social capital or social overhead capital. Why is it that social overhead capital should be distinguished from mere capital? What does it represent? How does it operate? These points at issue have been raised in order to meet the theoretically urgent need, since the theory of finance in itself remains vague, should the prevailing vague concept of the so-called social overhead capital not be clarified to begin with. Provided the concept of the social overhead capital represents various conditions required in actual production such as facilities for road, harbour, land, building, communication, means of transportation, etc., and yet at the same time it means in some cases key-industries such as steel and electric power, not to speak of human resources, scientific invention, service activities, etc. In other cases, nothing is more important than the clarification of such a vague concept.

However, without careful consideration to analyse why this prevailing vague concept ever came into existence and has come to have so much weight, it would be utterly impossible to understand its true nature, whatever definition of social overhead capital might be given. The primary purpose of this study, based on the presupposition of the vagueness of this concept, is to trace why and how the concept came to be developed.

It is therefore necessary to reduce it into some scientific categories and to find what kind of common characteristics so-called social overhead capital may possess. This is simply the continuation of what has already been studied¹⁾. Without these studies it would not be possible to develop any discussion of the public finance of social overhead capital and the

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1) For instance: Ken'ichi Miyamoto, *Criticism on Social Capital*, (1): "Collected Theories of Department of Economics, Kanazawa University" and "Collected Theories of Law and Literature Dept., Kanazawa University, 1962; Jun Ikegami, "Social Instrument of Labour* and Public Investment", *Economic Review*, Vol. 90, No. 5, 1962; Kazuaki Iwamoto, "Introduction to Public Finance", *Report of Kagoshima University Social Sciences*, Vol. 2, 1963; Ditto, "Function of Public Investment", *Economic Researches by Economic Association of Kagoshima University*, Vol. 2, 1963; Mitsuo Sato, "One Angle on Public Investment", *Meijo Shogaku*, No. 13-4, 1964.

* Social overhead outlays for productive labourers"

construction and the management of social overhead capital by the government.

Accordingly the present studies will be given in the following three Chapters :

1. Social Overhead Capital and the Policy of Development,
2. The Definition of Social Overhead Capital,
3. A View on Public Finance in Respect to Social Overhead Capital.

I Social Overhead Capital and Policy of Development

According to W. W. Rostow (*The Stages of Economic Growth*, Cambridge, 1960, pp. 24-25), social overhead outlays have the following three characteristics which distinguish them from investment in general :

- (1) Their periods of gestation and of pay-off are usually long.
- (2) Social overhead capital is generally lumpy.
- (3) The profits from social overhead capital often return to the community as a whole.

Each of these three characteristics quoted above is nothing more than a superficial generalisation of the social overhead capital, and moreover this description itself indicates that in such a concept are involved certain principles which make social overhead capital something different from private activity in pursuit of profit. Putting it in other words, terms like long period of gestation and long period to produce returns and lumpiness merely represent on the one hand one of the properties of some physical object, while on the other a term like the return of profits to the community as a whole gives rise to a problem of the ownership or possessory right under which this physical object should come. The agent by which the profits could be returned to the community as a whole must be something entirely different from any private remunerative activity : something public in rigid opposition to private capital. Putting it more straightforwardly, it wears something operating under the control of some governmental economic policy, and herein it can clearly be seen that the concept of the social overhead capital by nature has something to do with 'policy'.

Social overhead capital must be on the one hand some physical object having an extremely long period of rotation, a long period of completion and lumpiness, and on the other it must also be the concept of an economic policy governed by the principle of public activity. Consequently this very point is itself the decisive factor which makes the concept of social overhead capital so vague. Such characteristics as a long gestation-period and lumpiness are phenomena more or less common to any fixed capital. If

only this point is taken up, the characteristics of social overhead capital can be reduced to a mere quantitative difference in the case of ordinary fixed capital. Taking a set of lathes and the Nagoya-Kobe super-highway as examples, it is clear that both do have, though qualitatively different, a long gestation period which is distinguishable from liquid capital and also do have a lumpy nature as far as a given purpose for use is concerned — a lathe for processing metal materials and a super-highway for transport between Nagoya and Kobe. Therefore, it should be a prerequisite to make not only the *qualitative* but also the *quantitative difference* clear in order to infer the characteristics of social overhead capital which should be distinguished from ordinary fixed capital. Furthermore, for the reasons that the distinction between the government policy and the private remunerative activity is frequently found to overlap and that nothing more than the specific features of the aforementioned qualitative phase is known at present, it will be still more difficult to form a clear concept. For instance, if it must be admitted, as common interpretation does, that it comes under the social overhead capital when it is run by government and is operated on the independent remunerative basis, but it doesn't when it is run privately. Then it follows that what is not governed by some principles of governmental policy does not come under the category of social overhead capital, however definitely it may be characterised with a long period of gestation and lumpiness. This is a natural result of inconsistency arising out of the mere listing of only superficial characteristics when social overhead capital is defined. The vital problem at this point is, why is it that such a vague concept has come recently to be taken up with so much importance and whether such a concept is in itself something concerned with policy or not?

These circumstances can easily be understood if it is kept in mind that the problem of social overhead capital has come to be proposed after the World War II in a very close relationship with questions of the development of so-called "underdeveloped country or locality". Social overhead capital is an important link in all development projects — herein lies the key of this problem.

The following words of Rostow indicates its reason more straight forwardly :

"..... these three characteristics of social overhead capital — the long periods of gestation and pay-off, the lumpiness, and the indirect routes of pay-off — means governments must generally play an extremely important role in the preconditions period."

"..... social overhead capital cannot be formed..... by an enlarging flow of ploughed-back profits from an initially small base. You cannot get well started

unless you can mobilize quite large initial capital sums." (*ibid.*, p. 25)

In other words, according to those who advocate the theory of development, it is necessary for any underdeveloped region to have an initial impact to carry on any economic development, and one of the important measures to give this impact is the construction projects of social overhead capital, and for the purpose of this construction it requires an enormous amount of aggregated capital on hand which cannot be obtained by the way of gradual conventional accumulation of profits. It is only the government organisation that can procure such capital, and some steps or measures to give powerful assistance in the form of modernization of agriculture or the introduction of funds from overseas are most urgently needed at present in order to develop the underdeveloped region. Such is the story.

Again, R. Nurkse who advanced a theory for freedom from "The Bad Rotation of Poverty" argues in his *Problems of Capital Formation in Underdeveloped Countries*, 1953 as follows :

"If there is a place for government activity on the investment side, it is by almost general consent in the field of essential public works and services, ranging from roads and railways to telegraph and telephone systems, power plants, water works and — last but not least — schools and hospitals. We have noted that in the absence of these basic facilities, which in advanced countries can be taken for granted, the yield of any injection of private capital may turn out disappointingly small. While a large foreign corporation might construct some of these things itself in order to carry on its business, small-scaled individual enterprisers cannot be expected to do so." (R. Nurkse, *Problems of Capital Formation in Underdeveloped Countries*, 1953, pp. 221-22)

The following point is also accepted by R. Nurkse in the more straight forward way that the reason why the social overhead capital is talked about is because it is impossible in these days for any private capital to expand in the field of the underdeveloped countries without it and so the government is required to give assistance to this activity. Now it can be concluded that the train of thought common to these two writers quoted above shows not merely the comparison with activities of private capital, but also the realisation of and emphasis on the importance of construction activity by the government that can assist activities of private capital, making such thought a backbone of one of the types of assistance to be given to underdeveloped countries.

Now we can see at this point that it implies a tacit understanding that no development can ever be carried out unless a powerful development is carried on not so much by the self-supporting development of any country concerned as by some fund introduced from overseas as a key to

the economic development.

As far as this point of view is accepted, it is quite natural to see that the so-called social overhead capital is something produced for the convenience' sake to provide a theoretical basis to the policy to assist underdeveloped region, and that what it really means is correspondingly so vague.

At this point it gives rise to the following problem. While the construction of social overhead capital, its central business being the transportation enterprise, in many cases used to be handled in the past by private capital, why is it that the government has to handle it in the present stage of development policy?

According to W. W. Rostow's statement, "international assistance in the form of technical assistance, soft loan or donation is its unique characteristic at the present stage". Although the market for international private capital did exist in the past for the bonds particularly offered for the inclusive use by social overhead capital, he continues that "various changes in the market structure caused by economic instability at present have come to decrease the habitual flow of private capital in capacity of social overhead capital to a certain extent", the fact of which can well be taken as one of the answers.

This statement, indeed, describes the economical and political instability in colonies and subordinated countries under the confrontation of the socialist bloc and the capitalist bloc, but now this situation will be analysed from the viewpoint of the changes in the process of oversea investment.

Speaking of the U. S. A., forming a center of the capitalist bloc nowadays, foreign investments at the beginning of the 19th and 20th centuries were found to come from private sources (A. A. Fatouros, *Government Guarantees to Foreign Investors*, p. 16).

The period covering the two World Wars was a transitional period, and the moves of government capital became more important : (for instance, 30% of the total amount of exported capital of the U. S. A. during the period covering 1919 and 1920 was composed of government loans and assistance to foreign governments.) Private capital governed the field of foreign investment. Contrariwise, after World War II the transfer of capital between one country and another which was regarded as a "characteristic of war economy" up to that time came to be a central problem and the government capital came to play a leading part in the international money market (*ibid.*, p. 19). For instance, the government of the U. S. A., Import and Export Bank, Development Loan Fund, World

Bank, International Loan Corporation, International Development Association, and other economic assistance though in specific form, etc. can be taken to be its executive bodies and an ever increasing amount of the government capital tended to be concentrated particularly in the underdeveloped countries in the fifties.

From the standpoint of social overhead capital, the investment of the private capital to the underdeveloped countries (i. e. colonies) used to be made principally in indirect form in the 19th century (considerably concentrated to public works such as railways, etc.). In other words what was happening in the 19th century was that the loan was made the requisite of social overhead capital in the form of indirect investment, and the construction of social overhead capital as governmental activity came to be no longer the central problem.

Nevertheless after World War II, while the main function of the private investment has made the transition from indirect to direct investment on the one hand (for instance, the U. S. A. had spent \$ 30 billion for direct investment and \$ 10 billion for indirect investment in 1959), a great change has taken place to the effect that the construction of the social overhead capital has come to be covered by governmental investment on the other.

This dominance of direct investment is a combined result of above all other things the instability of the economic system of the capitalist world immediately after World War II and the overseas activity of international loan capital, which was mainly composed of steadily expanding petroleum funds in spite of such instability²⁾. After World War II, international loan capital, which experienced the great confusion in international loans and the devaluation of the thirties, found its way to direct investment, which is characterised by its speculative nature because it ordinarily, promised better profit though it has been by no means safer than bond investment. The direct investment, often being plotted by enterprisers who were professional risk bearers, has not only made its way to colonies or subordinated countries as suppliers of raw materials, but also has made its approaches in the form of partnership with government capital, thereby securing the opportunity for speculative profit.

“The transition from bond investment to direct investment can be regarded as one of the most important reasons for the increase of government foreign investment, because the latter has the tendency to cover various activities for which the loan was used to be made through bond investment.”

2) For instance, among all private direct investments of the U. S. A. at the end of 1958, petroleum \$ 5.3 billion (45%), mining & iron \$ 1.6 billion (13%), manufacturing \$ 1.6 billion (13%), public works \$ 1.2 billion (10%) were reported.

(Buchanan & Ellis, *Approaches to Economic Development*, 1955, p. 60)

So much is the description of the background of the actual situation, on the ground of which the necessity to make the concept of social overhead capital clear is insisted. The factors such as the opposition between the socialist and the capitalist worlds, the crisis of colonial countries, the intensified competition among imperialist countries, etc. will on the one hand make the investment activity of international loan capital all the more speculative, and at the same time those factors will on the other play a role to guarantee such risks in the form of construction activities of social overhead capital through government, thus inviting and encouraging all the more speculative activities.

When the expansion of social overhead capital in this country is traced back from this broad point of view, it will be found that the issues in respect of the development projects in this country have begun to be talked about concurrently when such problems as the introduction of foreign capital from the U. S. A. and the revolution of energy, e. g. petroleum had to be talked about on the one hand, and also when such problems as the exploitation of domestic resources after losing colonies as result of the World War II and when the development of the underdeveloped localities had made big issues on the other.

Putting it in other way, it can easily be seen that two entirely different and opposite situations have been delicately overlapped: one situation where something had to be developed not as a supply-center of raw materials but as a profitable market for commodities and capital, and another situation where the development had to be achieved for improvements of the basis of industries and resources. This is the very point which will be discussed later as a conspicuous characteristic of the public finance of the social overhead capital of this country.

II The Definition of Social Overhead Capital

As clarified in Chapter I, by so-called social overhead capital is meant what has come into existence as an inclusive expression of various requirements which are necessitated to provide the private capital proceeding to speculate under conditions of unstable economic foundation with various prerequisites for its activity. With such clarification in mind, some problems arising out of this definition will be taken up here.

P. H. Cootner defines social overhead capital as follows:

- (1) It is postulated that this group of industries produces services which are essential to, and prerequisite for invitation of an industrial expansion.

(2) These services must be rigidly immobile, so that the capacity for producing them must be constructed within the country to be developed.

(3) These investments are characterised by such properties as important economies of scale, long period of gestation and exceptional durability (P. H. Cootner, *Social Overhead Capital and Economic Growth*, in W. W. Rostow (ed.), *The Take Off of the Sustained Growth*, 1963, Chap. 15, p. 262).

Cootner regards these three stipulations as something essential to the definition of the social overhead capital, but these can be summarised in three points of (1) invitation for industries or its basis, (2) combination to the land, and (3) characteristics as a specific type of fixed capital. Therefore, our next discussion will be concerned with the meanings of each of these three elements from the standpoint of economic theory, thereby making an approach to a definition of social overhead capital.

(1) Invitation for Industry or Its Basis

A. O. Hirshman has taken up the direct production capital in contrast to the social overhead capital. Although it must be admitted that this view serves well for the sake of convenience, it does include the significant view which makes a clear distinction between the direct production activities and the various requirements in general to such production activities (A. O. Hirshman, *The Strategy of Economic Development*, 1958 p. 83).

In any capitalist society all production activities are represented as nothing but activity of capital, but the physical factors in the actual production process are the method of production (including machinery as production tools, raw materials as object of labour and other auxiliary materials, and from the standpoint of regarding the labour process merely as the process by which to multiply value these should be represented as invariable capital, and from the standpoint of regarding the human factors simply as labour power, then variable capital. Of these, the physical factors are of such nature as to be processed by the agent of the labour power, producing a new use-value through productive consumption: and the labour is of such nature as to be exhausted in the process of labour, purchasing daily necessities and others for living by the wage, personally consuming daily necessities in the field other than the labour process and reproducing the labour once exhausted.

In showing how the labour products come to be consumed is involved a complex process of exchange and distribution, and moreover, if the relationship between capital and waged involved in the production is considered from the aspect of society as a whole, it is clear that various economic systems, economic policies, etc. are involved in the production activity controlled by government authorities. Therefore, if the production activity of one nation is considered as a whole, it must be said that the

scope of the category which may have some indirect bearings to the labour process which is the direct production activity should be in fact immensely large. Again, if the numerous international relationship is taken into consideration, the extent of the so-called "indirect contribution" should still be more large-scale. Nevertheless, if the second and third characteristics of the social overhead capital — fixation to the land and extremely long period of gestation — are brought in mind, it is prerequisite that this indirectness should have the characteristics of being fixed and durable with in the extent of economic activity of one nation, for which reason the extent has to be considerably limited. (Since the very concept of social overhead capital is vague from the very beginning, it is quite natural that the close study of its content, basing on the presupposition of such vagueness, will have such limitations.)

Therefore, among all requirements essential to production activity, such categories that may be combined to the land in the form of superficially durable and fixed factors must be picked up one by one.

Firstly, the production process, i. e. the process of productive consumption will be analysed. If the power of labour and the object of labour are excluded for the reason that there is no fixed relation between those two elements, what remains is the category of the instrument of labour, which can be divided as follows :

(i) The muscular system of production — mechanical instrument of labour

(ii) The artery system of production — vessels.

(iii) The social instrument of labour — "all objective requirements commonly required for the process to be achieved" — not being involved directly in the process, but without it the process cannot entirely be put into practice or can put into practice only incompletely: for example — the land, workshops, buildings for use by labourers, canals, roads, etc. in the sense to provide workers with places to stand on.

Now, the central part of this indirect contribution to the production process is none other than this category in terms of such social instrument of labour, and if the concept of the social overhead capital is by any means to be defined in a perfect and scientific way, then it will be essential that the definition should be confined to this limitation.

It is because the production activity presupposes the the contribution to the production activity and that part which constitutes the basis cannot simply be something other than this category, and so it must be noted that the meanings of "indirectness" involved in the concept of the so-called social overhead capital these days contain too many miscellaneous collateral

elements. It is essential, if the social instrument of labour is to be defined, to distinguish the direct production capital from the indirect production capital. The latter is the term applicable when the stipulations of the social instrument of labour is considered, and the former is the general term covering both the labour powered and the labour object among the instruments of labour such as the muscular system, the artery system and the raw materials with supplementary materials ("The Social Instrument of Labour and Public Finance", *Economic Review*, Vol. 90, No. 6).

The special characteristic of the social instrument of labour is the fact that it has a very close relationship not only with indirect contribution to the labour process, but also with various spontaneous conditions, above all, land requirements. This point will be taken up in the next Chapter.

Secondly, the point of our next study will be directed to the reproduction of labour power, that is, the process of individual consumption in terms of the metabolism of living physical bodies of workers.

It is only as far as the qualitative improvements of labour power or living conditions have some bearing on the production process that individual brings forth its indirect contribution to production activity.

Here again, in the same way as the distinction between the direct production process and the other universal requirements to support such process existed, the distinction between the direct reproduction of life and labour power on the one hand and the other universal requirements arising out of such reproduction on the other does exist. In the case of the daily housekeeping book of workers the running expenses are clearly distinguished from the fixed expenses. The former includes the vital necessities for food and clothings and the latter is composed of the so-called durable consumer goods and living requirements combined with land such as premises and houses. Again, as result of circumstances whereby the need for education, standardised rest and welfare and health facilities on the part of organized workers has kept growing since the Industrial Revolution, the fixed expense such as buildings, equipment, drinking water works, drainage works, parks, popular recreation facilities, etc. which should be distinguished from the running expense such as teachers' salaries, notebooks and pencils, continues to grow. We will hereafter call such part that has a fixed relationship to the land which constitutes the foundation for individual consumption while participating in these individual consumption as being the fixed consumption object, and the whole of running expense and the expenditure of consumer goods added together as being the liquid (floating) consumption object.

From this viewpoint what is included in the category of the so-called

social overhead capital is only the fixed consumption object, but from the viewpoint based on the indirect contribution to the production activity, we must note carefully to realise that it implies entirely different meaning from the indirect contribution of the so-called social instrument of labour to the production, for the reason that the whole of the reproduction of the labour power has something to do with the indirect contribution. If the indirectness of the fixed consumption object should raise a problem, it has a two-fold meaning. In particular, one is that the participation in reproduction of the labour power does give some influence to the production process and another is that the universal requirements for individual consumption itself are thus provided. With the presupposition of this difference in meanings the fixed consumption object will provisionally be called the second category of the social overhead capital.

Thirdly, we will proceed to close up the subject of the indirect contribution to the production activity in the process of exchange and distribution which is, as it were, a pipe to link the productive consumption with the individual consumption. Here we can find various types of facilities related with the circulation of commodities—commercial business, carrying trade, warehouse business, etc.—and many varied banking facilities. These facilities produce important reactions to the direct production activity as well as to consumption activity, depending on the speed of realization of the value of commodities, distribution of income to each individual, the size of its scale and the economy of circulating expenses, etc. It is quite natural that these facilities should also be divided into liquid object and fixed object—building to be used for business or warehouse, etc.—in the same manner as in the case where the object of individual consumption is considered, and we will call all of these added together as being the means of fixed circulation. It is exactly the same as with the fixed consumption object which is involved in the individual consumption that the means of fixed circulation are by no means involved (with the exception of the means of transportation to carry goods) in the productive consumption but they are simply to be exhausted.

Fourthly and lastly, if it is taken for granted that economic policy and economic systems react always to the production activity, then it follows that the economic contents of national facilities which presuppose the redistribution of a nation's income through the financial process and other various systems should have some indirect influences on the production activity. Accordingly, among all nation's facilities how could that part which is fixed be formularised? Putting it in a more definite way, things like government buildings, military installations of varied types, police

facilities, land owned by government, etc. should naturally be classified under the fourth category of social overhead capital.

If we call these national fixed facilities, then they will compose the presupposition for various administrative activities as one basis of political presupposition for private production activity. For an instance, A. Smith, in developing his theory of public works, made citation of not only the social instrument of labour, which has been already discussed by the present writer, but also the rampart to prevent the barbarian's attack and it is the most adequate sample of the national fixed facilities (A. Smith, *The Wealth of Nations*, Everyman's Library, Vol. 2, p. 219).

When these four elements — (1) social instrument of labour, (2) the object of fixed consumption, (3) national fixed facilities, (4) means of fixed circulation — are re-examined, what appears to be most striking is not so much of something common to each of these four elements as of conspicuous differences among them.

In the first place, in contrast to the fact that the social instrument of labour generally proceeds into the productive consumption, the rest of three elements are simply left to be consumed and, moreover, this consumption is of such nature that some of them proceed into the reproduction of the labour power, some are left to be wasted in the process of circulation and yet some remain entirely unproductive; therefore substantial difference by nature is noticeable³⁾.

If some points in common to each case must be found the result would be a mere repetition of synonyms of the first definition: invariably combination with the land, the production by construction industry and the form of utilisation value undergoing no change for a long period, yet being left to be exhausted gradually. And so our next study will be directed to the relationship with the land.

(2) The Social Overhead Capital and the Fixation to Land

The very thought that the social overhead capital cannot be imported, and the reason why the emphasis is placed on the problem of so-called lumpiness have closely associated with such way of thinking that the social overhead capital is combined with land. If so, then what could the

3) In contrast to this way of classification, there is another means of distinction between those related with national capital and those used for administrative purposes, and sometimes only a vague line of demarcation is drawn between the former which is something like independent remunerative enterprises (investment on enterprise) and the latter which is nothing but the mere expenditure for the administrative purpose (administrative investment). These classifications are said to be based rather on the difference in the forms of operation, thereby proving no immediate conformity with the classification based on the substantial economical process in terms of productive consumption or unproductive consumption.

characteristics of the social overhead capital be?⁴⁾

The first characteristic is that social overhead capital has a close tie with the construction industry. The construction industry must employ a great number of workers on account of its technical nature. Besides it is no easy matter under capitalist production methods to make accurate calculations of cost.

Secondly, it has the firm contact with nature and the construction of the social overhead capital which presupposes the disorderliness on the part of capitalist government has come to have a close relationship with spontaneous disasters and social life. One phase of the so-called disasters and social nuisance has some relationship with it.

Thirdly, because the large-scale of social overhead capital is combined with the fixation to land, the social overhead capital is forced to bear a considerable loss and waste when confronted with the gradual expansion of the works or new competitive rivals. The limited fund and the thoughtlessness without a plan due to the disorderliness of capitalist government tend to enlarge such waste. Today this problem is closely related with the re-development of cities and industrial areas.

Fourthly, the combination of the particular land with the social overhead capital is unavoidably related to the local economic development. It is because of this very reason that the social overhead capital has such a close relationship with the development of the underdeveloped countries and local development.

Fifthly, the relationship with the land naturally gives rise to problems related to the ownership of that land. The acquisition of land has a very serious relationship with the fluctuation of land prices, and recently it has come to be related to investment on land.

Again, in the case of the leased and the rental raises a problem and the vicissitudes of land utilisation begin to bring out its influences. Still further the concentration of land-owners for the purpose of the construction of the social overhead capital exerts accumulative effect regularly in the sense that it excludes the small landowners.

These five distinctive features make explanation of what can be called the accumulated results of the expansion of the social overhead capital. In other words as far as the state of the disorderliness of capitalist government is presupposed, the construction of the social overhead capital, as pointed out by K. W. Kapp (*The Social Cost of Private Enterprise*, 1950), leads to the destruction of natural harmony and brings forth spontaneous

4) "Exclusive Land Ownerships of Road by the Nation", Shizuoka University, Law and Economics Junior College, Law & Economics, Essays, No. 15.

disasters and many other types of social harms (so-called social nuisance) caused by spoiling of rivers, sinking of ground, unreasonable cutting down of forests, etc. As the social overhead capital continues to be enlarged in scale without justification, so the social harms and damage are destined to break out in much greater frequency and seriousness, whereby the construction of the large-scaled social overhead capital in turn comes to be required again under the title of the re-development of cities or locality development.

If the rise in the prices of land and the sudden demand for construction are involved, this process of accumulated expansion would be further accelerated.

(3) Social Overhead Capital as a Specific Fixed Capital

The characteristics of social overhead capital as a special fixed capital which should be distinguished from fixation to the land might be summarised as follows :

Firstly, the fact that the period of gestation lasts for a long period, namely the fact that a long period of labour is required for a certain project to be completed, would require on the one hand an enormous amount of capital, and if suspension takes place due to some reason, unless this operation be continued, "the means of production and labour so far expended in its manufacture are wasted" (K. Marx, *Capital*, Vol. II, Translated by E. Untermann, 1919, p.263). Therefore, it must be noted that this characteristic would have the effect of expansion or contraction to an extreme extent.

Secondly, the extremely long period of rotation must be noted. Constructions like canal, dock, steel or stone bridge, etc. often have spans of life as long as a century, and their depreciation accounting can hardly be put into effect. This characteristic gives us an self-explanatory story that an enormous amount of capital at the starting stage of construction would be forced to be spent, and that, depending upon spontaneous conditions and the elasticity of usability, its wear and tear would have corresponding effects in many ways.

Thirdly, "the social overhead capital" is not what comes under the category of capital from the economical aspect with exception of social instrument of labour. In fact it is simply what is merely to be consumed. Correspondingly, in some cases it would proceed into productive consumption, and in other cases into individual consumption. Now at this point what should be particularly noted is the fact that, taking the so-called public works, road, industrial water, etc. for examples, when they are used for carrying of freight or industrial water, the same social overhead capital

would proceed into the productive consumption, and on the contrary when they are used for the transport of passengers or the water for domestic use, it would likely to proceed into the individual consumption. This special feature provides the theoretical basis to raise the problems of two-fold public charge system for sharing on the part of utilisers, thus presenting one of the peculiarities of collecting expenses.

These points now lead us to conclude that the large-scale of the social overhead capital in itself is always followed by a risk of idling and surplus caused by economic or other changes on the one hand and that it has a possibility to shift the responsibility of undertaking this risk to the consumers in the form of "sharing on the part of utilisers" or "two-fold charge system" on the other.

Now we have reviewed the content of social overhead capital from aspects of various categories of economic theory, yet it makes it impossible to give a unified scientific definition since its content covers too many complicated elements. However so much is clear enough that it is a term to represent the fixed capital in a broad sense which includes the implications of social instrument of labour, object of fixed consumption, means of fixed circulation, fixed facilities of the nation, and the long period of rotation. Also it is very clear that, if the disorderliness of capitalist government were carried on to the fullest extent, it would become a hotbed for an enormous waste and loss when exposed to the accumulated expansion of various types of public nuisance like spontaneous and social disasters, etc., not to speak of economic and political changes.

The construction of social overhead capital, due to its large-scale nature, presupposes a certain limit of accumulation of capital, the large-scale social division of labour and the relative surplus of capital and labour. In other words, it is true that this construction is a great achievement as a result of the development of social nature of production, but at the same time it must be admitted that it gives rise to the speculative expansion which is a result in exact opposition to the organized administration, various types of social nuisance, and waste and loss. Provided such social overhead capital has a very close relationship with finance, what kind of rules could it be controlled or governed by?

III A View on Public Finance in Respect to Social Overhead Capital

As considered in Chapter I, the view on the public finance of the social overhead capital is one of the products arising out of recent theories

of development, and although it is partially talked about as one branch of various theories on public or government investment, it has been pressed with the urgent need to re-constitute itself as one integrated system to include government properties, government works and public works finance including part of local finance, and itill more to add, financing of investment and loan, public enterprise financing and public service works financing, not to speak of the recent theory of public nuisance. Of course it is practically impossible for us to attempt such an overall discussion in this brief paper, but the present study will be directed on the process through which the finance of the social overhead capital developed and its economical significance in the light of stage of growth of capitalistic economy.

(1) Finance of the Social Overhead Capital in the Industrial Stage of Capitalism

The finance of the social overhead capital in the industrial stage of capitalism was characterised as follows :

(i) Construction of various government offices and judicial facilities necessitated for execution of the power of capitalist nations and strongholds or ramparts for the protection of the nation had all been made as national facilities, in the form of the protection of the capital from any class-revolt or foreign invasion and also of the guarantee for free activity. As pointed out by Smith, the rampart to protect the capital from any barbarians' invasion was one of the most important items of public civil engineering works : one of the ruler's duties.

(ii) Another step to protect the free activity of capital is the construction of the social overhead capital as one of the rings of varied types of improvement projects for capitalist contradictions. The construction of many varied social instruments of labour such as roads and railways, and the objects of fixed consumption as results of various measures to maintain the labour power such as facilities of education, health and hygiene facilities, street-making by city planning, repair and maintenance of drainage, etc. can be set about by the hand of the nation. Although those belonging to the means of social production among all these are constructed in the stage of insufficient stock of accumulated capital by the nation, the rapid growth of accumulated capital and the appearance of combined capital like joint-stock corporations had a tendency to deprive the nation of the construction of the social instrument of labour, and as its result the social instrument of labour underwent a rapid expansion a objects of investment by private capital. The so-called "railway-boom" was a good example of this. In striking contrast to this there was no

longer a possibility for the construction of objects of fixed construction which was followed by many urban-problems or relief measures for the poor to have been a source of profit for private capital.

(iii) Such processes as the frequent concentration of various types of properties to the nation, mainly composed of land, which was followed by exploitation of small-scaled producers and the presentation or disposal of the social overhead capital as momentum to original accumulation of capital were in fact what had been plainly put into effect in the form of the seizure of land from people living along railway-lines during the period of construction of various social instruments of labour like roads and railways; particularly so in colonies. Nevertheless it cannot be denied that the social overhead capital financing had made its appearance in the form of a forerunner to special financing system when the income from the railway or forest composed one of the foundations of the nation's finance, thus providing a momentum to invite the development of the national credit as with railway bonds. Putting it in an other way, the new state of affairs was reflected in the finance system in such ways that, for instance, the railway could produce surplus value on the social instrument of labour and could gain some profit, however low the rate of profit might stand, as long as the foundation had been provided enabling the government to operate independently and profitably to a certain extent when necessitated by the large-scaled structure causing too much pressure on finance as a whole.

However, it is found that these three distinctions have been closely intertwined in nations in the industrial stage of capitalism in reality and particularly the railways, being the social instrument of labour, had been constructed and operated for the immediate purposes of war, improvement and financial income. Thus in many cases the different purposes were mutually contradictory. Also it is usual that the economic capacity of a state at the time of original accumulation stood side by side with other functions of the state, and was used together and was made use of, and that it was never totally exhausted.

As to the basic characteristic of the finance of the social overhead capital in the industrial stage of capitalism, the following points can be summed up: firstly, while the foundation of national authority, the purpose of improvement and the purpose of the finance can be clearly distinguished on the one hand, at the same time each of these has been contradicting the others. This contradiction becomes more and more conspicuous in the case of the social instruments of labour.

Secondly, the indication of the possibility of independent remunerative

management had already been making its appearance in the construction of the social instrument of labour, arising out of the very nature that the large-scale structure itself exerted its pressure on the finance on the one hand and arising out of the realistic ground that it could produce surplus value on the other. This two-fold nature may well prescribe the basic characteristics of the finance of the social overhead capital, about which our study will be developed in detail later.

(2) Monopolised Stage of Capitalism

(i) General Characteristics of the Finance of Social Capital in the Monopolised Stage

The formation of monopoly and the control of finance capital had brought about a great change in the public finance of capitalism. In a word it was the adhesion of finance capital and public finance. The personnel combination or interchange between the monopolised enterprises, particularly large banks, and government organisations had unavoidably made way for the monopolisation to enter into any department of government organisations, be it the construction of the national fixed facilities or the social instrument of labour as in the case of railways, and thus it begun to be parasitic to government departments as a profitable market or a source of excessive returns. This parasitic approach, being combined with the particular law of economic development, would give the following characteristics to the finance of the social overhead capital :

(A) Increase of the expense of national defence and expansion of national fixed facilities.

(B) Intensification of the unbalanced development among various departments of industry : chronic stagnation of the excess in capital and labour : rushing flow of the finance capital to critical and more local department and adjustment of the industrial structure to such capital on the one hand and the construction of the social overhead capital as large-scaled unemployment relief measures on the other.

(C) Additional exploitation due to the construction of the social overhead capital : above all acceleration of inflation through encouragement of investment to land and the rise in prices of land : more possibility of failure of small capitalists and small producers, and additional sweated labour.

These three points contradict each other. For example, the military expenditure and the social instrument of labour frequently conflict in budget-making. Although the rise in land prices is the result of the construction of social overhead capital, again counter-reacting to the construction process, it leads to the accelerated expansion of financial expenditure. Now our

next study will proceed, mainly in the light of the public works finance particularly among all social overhead capital finances of this country after the last World War, to consider how such various contradictions in financing all kinds of financial systems as provisional settlements of such contradiction and corresponding ideologies have come to arise out of these basic characteristics, and still further how these systems have played a part in making those contradictions grow in numbers and in seriousness.

(ii) The Structure of the Finance of the Social Overhead Capital and its Contradictions

The stage of the development of the finance of the social overhead capital of Japan after World War II can be roughly divided into two periods: 1946-54 and 1955-to date. Since it is found that the most of the problems in respect to the finance of social overhead capital have been intensified during the period from 1953 to 1954 which represents the transition between the two periods (Table I), the general trend of the finance of social overhead capital may be formulated from this aspect as follows:

(A) Various Contradictions of the Public Finance of the Social Overhead Capital

The finance of social overhead capital of this country after the World War II was found to have been centered around that of the public works, and their starting point was the unemployment relief works (Shikano, Yoshio, *Public Works*, Minato Publishing Co., 1955).

Up to 1954, fundamentally speaking, the expansion of the expenses to cover the public works for the rehabilitation of the agricultural production capacity, and mountain and flood control works were the distinctive features, but in 1954 the provision of the social overhead capital was

Year	Investment	Change	Total
1951	163	—	
52	202	+ 39	
53	280	+ 78	
54	285	+ 5	+210
55	264	- 21	
56	296	+ 32	
57	373	+ 77	
58	687	+314	
59	816	+129	+309
60	996	+180	

Unit: Billion ¥

Note: Figures for 1951-57 and 1958-60 are not continuous.

Source: Rehabilitation Section, Administrative Bureau, Ministry of Self-Government, *Report on Administrative Investment*, pp. 2-8.

obliged to be suspended with 1953 as its peak. What was happening at this period can well be taken to illustrate various contradictions in respect to the finance of the social overhead capital, though no better than the beginner's way.

Firstly, what must be noted is the fact that the severest effect of the attempt to reduce the scale of the finance as a whole had been experienced

(Miyazaki, Jin (ed.), *Public Works and Finance*, Vol. 1, Zaisei Publishing, 1962, p. 38). It can be presumed that needless to say the curtailment of this year, though it happened during the period of overall cutting down as an inevitable counter-measure for the unfavourable international have balance, was an extremely elastic element for both political and economic changes, and that during the period of sudden expansion since 1957 it had laid the firm background on which a strikingly sudden increase even to nearly speculative extent had to be undergone.

Secondly, the state of things to be noted in addition is the fact that the still further cutting-down had to be put in effect as result of the increase of expenditures for the national defence plan, the remedial measures for the peace rehabilitation, the pension plan for repatriates and bereaved families, etc. This very trend in itself had given rise to the contradiction: the more intensely the military economic system has been put into effect, the more conspicuous the contradiction has grown, the fact of which could well be taken to be a forerunner of the general trend, showing that the war economy governs the social overhead capital with only exception of the national fixed facilities which should be included in the military expenditure (Jun Ikegami, *Monopoly Power and the Increase of Government Sector* in S. Usami, M. Utaka & T. Shima (ed.), *Lectures on Marxian Economics*, Vol. 3, Yuhikaku, 1963).

Thirdly, the following characteristic may also be pointed out: to intensify the unbalanced development of agriculture and industry with the finance of social overhead capital as its lever: to intensify the unbalance of the capacity of local finance: to further the centralisation of financing and at the same time to invite the dependence of local finance upon borrowed capital as in the case of local bonds: to be forced to become subordinate in financial relations.

While the cutting down was being enforced in 1954, expenses for land reclamation works and fishery budget were cut on the one hand and at the same time contrary to expectations the road maintenance works and its further development were put into effect, giving cause to the gradual intensification of unbalanced development of agriculture and industry, and the works under the direct government supervision had been reinforced under such pretext as to decrease the share on the part of local finance on the other. This basic trend has been pursued consistently since 1955 and has further been strengthened since the days when the new long term economic programme has made a definite proposition to support the priority for the improvement works of the basis of such type of industry as the social instrument of labour, and because of this priority, the contrary trend to put less weight on those parts that have direct relationship with livelihood,

housing, etc. has also been carried on consistently⁵⁾.

Fourthly, in spite of the fact that the construction of the social overhead capital requires a highly technical planning because it is of an extremely large-scale nature, having a long period of rotation, this period of transition has illustrated how frequently and widely the absence of well contemplated plans came to be commonplace routines. At that time the "Counter Measure Council for Mountain Works and Flood Control" had to be established in the Cabinet and a long term project on a priority basis was prepared as its result, and yet it had to be boldly disregarded and the budget was consequently forced to be cut down.

Moreover, because each Ministry extravagantly opened the budget and the basic investigation had been conducted inadequately when the plan was to be prepared carefully, enormous expense had to be earmarked for the unfinished work for its completion⁶⁾. Besides each related department was so inadequately coordinated without any plan that the item like "Expense for the Investigation of All Land Development Works" had to be put in effect. This indicates that, taking a road construction project for an example, the background which would require the essential attempt to re-prepare an entirely new project as soon as possible had been in the making. The New Long Term Economic Programme had the following provisions.....

¥ 1,000 billion for a 5 year project (1959)

The Double Income Programme ¥ 4,900 billion for a 10 year project (1961-)

The Third 1 year project, ¥ 2,100 billion for a 5 year project.

Only in three years is the expansion found to be more than three times.

Fifthly, these corrupt elements, arising out of the government lacking in orderliness, like diluted budget, additional claims, taking advantage of disasters, illegal abuse, etc. tend to have considerably much easier uprising through the agents of construction business. These will destine the budget for further expansion.

5) Many finance scholars unanimously accept this view. Y. Shima, "Double Income Project and Public Investment", (1-2), *Economic Review*, Vol. 86, No. 5, 1960, Vol. 87, No. 2, 1961; Y. Shima, & K. Miyamoto, "Structure of Financing Investment and Loan", in *Finance of Money Market*, Vol. 3, Yuhikaku, 1961; K. Miyamoto, "Locality Development and Investment and Loan Finance" *Urbanization*, Vol. 52, No. 7, 1961; T. Ozawa, "Finance of Investment and Loan and Strengthening of Economical Background", *Collection of Essays in Commemoration of Dr. Takeo Suzuki*, Shunjusha, 1960; "Characteristics of Recent National Subsidiary System", *Monthly Jichiken*, December, 1962; K. Miyamoto "Public Investment and its Actual Status and its Role", *Economic Seminar*, February 1963; Yoshio Hayashi, "Changes in Finance Structure and its Mechanism to Excite Public Investment", *Tokyo City University Economy and its Economics*, No. 10/11, 1962.

6) Conspicuously notable is this trend in 1955, and for Kawai Overall Development Project, for example, ¥ 20.9 billion prior to the latest change was increased by ¥ 12.6 billion.

In order to settle these contradictions even temporarily it is necessary to contemplate a new reform of the prevailing system in the light of full appreciation of the basic characteristics of the finance of the social overhead capital. Now, we will turn to our next study in trying to find what has been done in the way of contemplation of this kind.

(B) The Structure of Social Overhead Capital

Granted the finance of the social overhead capital was approaching a crisis on the one hand and it was in the trend of increasing expansion on the other, it is natural that some effort was made to change the system of the finance of the social overhead capital by contemplating some kind of 'rationalisation'. As already referred in the previous Chapter, the move to the special finance system was none other than its first indication. The function of the finance of social overhead capital may be classified into the following types :

- (a) Disbursement from Ordinary Budget Account.
- (b) Disbursement from Special Budget Account.
- (c) Public enterprise type, and the tendency to the independent remunerative management based on the financial investment and loan.
- (d) Public Corporation Type.
- (e) Public Utility Practically this is public enterprise⁷⁾.

The above order shows the direction of the development of the social overhead capital and at the same time it is found to agree ultimately, from the aspect of its content, with the direction in which the so-called 'performance budget' is proceeding. Now, we will study next those factors that can prescribe the trend of proceeding toward such order in the light of the underlying ground and requirements, because it is comparatively of recent happening that the change in the finance system has taken place, though the category of the social overhead capital can be traced back historically in such a way as already studied.

First of all, when we consider the reason why the finance of social overhead capital is likely to be managed in the form of independent remunerative basis, we can see that it is because the operation of social instrument of labour which is one component part of the social overhead capital requires by nature the employment of productive labourers in reality

7) D. Lardner, who has published the first systematic book on the social overhead capital, particularly on the subject of railway, has made special note of monopolised nature as result of the organized management of railway (D. Lardner, *Railway Economy*, Chap. XXII, 1850). The very thought that the public benefit works would presuppose both monopolised works and monopolised prices and for that reason the supervision by the nation would be essential, is characteristic of the theory of public benefit works of small-scaled bourgeoisie (See Adams & Grey, *Monopoly in America*, 1960).

and produces surplus value. Taking the government railway for an example, book-keeping and accounting systems, even depreciation accounting had been adopted from the very beginning, thereby making it possible to produce gains to the nation, however slight they might be qualitatively or quantitatively. Therefore it was essential to manage, to administer and to procure elastic funds to be dealt with in a different way from the general account budget⁸⁾. In other words as far as the operation of the social instrument of labour is concerned, the reason why the floating of public loans was liable to be approved was based on such grounds. As to canals and roads excluding railways, as far as their lives are semi-permanent, they are not dealt with in any special way. But whenever the replenishment as a result of sudden wear and tear is necessitated perhaps due to sudden increase of traffic, it is likely that the same ground as in the case of railways might arise. However in either case it must be kept in mind that it will hold true that these grounds are only applicable to the social instrument of labour which employ productive labour, gaining actual surplus value⁹⁾.

On the other hand the basic nature commonly found in the category to which the social instrument of labour and other social indirect capital belong is the fact that the production can be made possible only by means of the construction labour through the agent of constructors. When the government happens to have such construction work in the hand of its own department, it is one of the most important problems for the finance of

8) The principal source of the fund for the National Railway of Japan first of all was foreign bonds. Then the next was ¥12.5 million public loan which were productive bonds in 1878, and out of which approximately ¥2 million was allocated to the construction of the railway. It is particularly noteworthy to realise that the railway of this country had its starting point in the form of productive issue bond (The Toyo Keizai Shimpo (ed.), *Japanese Economy and the National Railway*, 1962, p. 2). Finance was put in effect, and the independent finance system was formed through the revision of the Regulations in 1909. It is also a matter of interest that a serious cutting down of the number of employees had been effected at the same. Reference can be made: The relation of the development of capitalism of this country to the National Railway, Y. Shima, *Capitalism of this Country and the Government-owned Railway*, Nippon Hyoron-sha, 1950.

9) The theory of "independent remunerative management" by the Transportation Investigation Bureau insists the necessity of establishing public corporations, making the following statement: "it is essential that national enterprises should be dealt differently from ordinary national administrative works. That is to say, as far as the national enterprise is making production, if no productive and economical supervision should be conducted, the primary purpose of nationalisation could not be attained (Underlining by the present writer. Transportation Investigation Bureau, *Theory of Independent Remunerative Management*, Chuo-Shoin, 1948, pp. 15-16).

This particular indication is of much interest in a sense that it is trying to point out, though unconsciously, the possibility of some relationship between an enterprise engaged in "production" and the special features of its financial system, coming close to say that it must be said that the relationship between these two factors have not yet been clearly brought to light.

the social overhead capital to carry out the rationalisation of construction works, to mechanize the processes, to work out the earliest possible completion of the works and to gain as much surplus as possible from the labourers of such department under the pretext of the economy of the budget, and when it takes the form of a contract by a private constructor, it is another important problem to sweat private construction workers harder and to economize the payment from the estimate.

In particular, it is because the very management of the finance of the social overhead capital acts as an agent for the process to multiply value, or the process of construction acts as an agent for the process to multiply value that the strengthening of labour and rationalisation in the process to produce surplus value comes to have a close relation to the contribution to the budget or economy. Such is the reason why the element of "rationalisation" has been found so closely connected with the finance of the social overhead capital.

The recent system of state-monopoly capitalism has added new conditions to this background. The first condition is the financial expansion and financial crisis (its basic cause arising out of the permanent and military economic system) on the one hand and the super-abundance of capital and labour, that is, the existence of the financial capital that has lost the opportunity to multiply value (the so-called private fund and foreign capital) on the other. This state of affair naturally leads to the relief of this financial crisis through what may be called the road to the practical use of public fund or the assistance to the financial capital by means of additional funds such as postal savings and insurance reserves. In this case, because the social instrument of labour operates through the process to multiply value, it is possible that the profit could be made and the process of the public construction could produce additional surplus value of the construction labourers through "rationalisation", and the budget "could be saved". Henceforth it follows that these circumstances come to have an important meaning, showing where and how the out-of-use financial capital could be used (including the meaning not only of the way to cut down the production and circulation expenses by improving the production requirements of enterprises but also of its market).

The second condition is that the elastic use of funds is necessitated because the administrative authorities that are tied to the loan capital are in reality in such distressing situation that no emergency measures can be successfully disposed, having no smooth control over the Diet. Especially, if the construction of social instrument of labour is followed by the disorder on the part of government, because of the necessity to cope

with the further expansion or contraction under the mask of general activity-counter-measure, the trend to keep away from the eyes of the Diet is likely to arise.

The third condition is that, once the fund that could collect returns has been formed, any activity would come to be regarded as the source of profit, even if it may not produce any surplus in reality, and it would try to gain returns by making use of such fund even from houses or roads for use by individuals. Moreover, because the most of the social instrument of labour could proceed both in the productive and individual consumptions, it would be by far easier to shift the share to the general public.

It is logical that the following systems have to come into effect out of these three conditions coupled with the a forementioned background :

(a) Budget system on the basis of independent remunerative management which emphasises economic efficiency or efficiency of investment (profit first principle, guaranteed cost principle).

(b) Preparation of overall and unifying budget according to each purpose of works on the basis of function and activities (substantial extension of authority of administrative authorities).

(c) The account system which is partly based on justifiable part of private companies, case by case accounting principle : the operating expense and financial expense being separated.

Although (b) and (c) are not totally adequate for the budget of public enterprises and the investment and loan projects, the direction of their proceeding seems basically to be the same. In other words they are making approach to such a financial system which may provide the way for free activity for the sole purpose of the efficiency of investment by furthering rationalisation, and even by attempting to flee from the Diet¹⁰⁾. It appears to be, as it were, the almighty measure which could relieve both of the financial crisis and the crisis of finance capital at the same time.

Now, our next problem is to analyse what this trend could have brought forth in reality.

(C) Expansion of Contradictions and Strengthening

Provided the element of independent remunerative management being

10) The view held by M. E. Dimock who holds to say that the enterprise as a whole was a result of amalgamation of "socialisation" and "rationalisation" is a fine example to show the picture of such financial system. Nevertheless, you will see that what was meant here by "rationalisation" is not the rationalisation from the standpoint of the smoother management of the financial system itself, but the rationalisation in respect to the productive labourers and additional tax-payers, that is, the process to strengthen the production of surplus value and its redistribution (Tomoji Ichinose, *The Theory of Finance of Public Corporations*, Dobun-kan, 1956, p. 10. See the illustration of Dimock's principle).

strengthened by the finance of the social overhead capital, the greater use of the financial investment and loan is being put forth, and more public corporations are being established, whether or not it would be possible to solve various contradictions that had been in existence since the beginning stage, as it is, the result would be that various contradictions would remain and become intensified, and making it worse, new contradictions would begin to arise. Its basic characteristics may be summed up as follows :

Firstly, the basic characteristic of the independent remunerative management is such that it comes to be related with the process of rationalisation of labourers engaged in the operation of social instrument of labour and labourers working at the public construction site, cutting down of manpower and strengthening of labour and sub-contracts. The stress laid on economic efficiency would come to appear here in the most direct and bold form of rationalisation.

Table 2 Labour Accidents by Industries (1961)

	Total No. of Cases	Killed
Manufacturing	459,365	1,108
Mining	110,223	838
Traffic & Transportation	9,609	90
Civil Engineering	216,589	2,328
Freight	99,620	486
Forest	28,858	284
Others	43,626	396

Source : Bureau of Statistics, Office of the prime Minister, *Japan Statistical Yearbook*, 1963, p. 530.

It has been historically proved that the more strictly the emphasis was placed on the types of the national railway and other public enterprises of this country, the more severely rationalisation had to be carried through. In this process we can see the sudden increase in the number of labour disasters and accidents as an

inevitable result of the management of public works and constructions and it can also be illustrated that the direct effect of the reform in the financial system is nothing but the rationalisation of labour process (Table 2).

Secondly, the stress on "efficiency" would lead to the result that it would infringe boldly and more and more upon the interests of the consumers and the people at large which had been conventionally approved at least conventionally at the cost of official denial of public spirit, thus strengthening the trend of the investment of social overhead capital to concentrate to such promising parts or localities for more remuneration. The so-called urban and rural confrontations would tend to grow more and more seriously because the amount of investment would be concentrated to the social instrument of labour and the objects of the fixed consumption would tend to be more and more handicapped. The objects of fixed consumption seriously confronted with "the deficiency of budget" — educational facilities, public health center facilities, etc. again would tend to make better use of their assets by placing emphasis on the financial

investment and loan, attempting to introduce the private fund and financial capital, thus further leading to create a new circumstance where the locality-handicap and the scale-handicap would be forced to grow greater and greater. Consequently the assistance to local or petty works would tend to become less and less under the pretext of excluding the so-called "all-round policy".

Thirdly, while this trend would make the finance of the social overhead capital proceed toward improvement works of the basis of industries of financially monopolised capital, solely because of such trend, it would result in producing more causes for disorderliness and speculations on the part of government. The move of local public corporations to contemplate the increase of tax yields by means of obtaining an enormous amount of loan for the purpose of inviting factories. The sole reason why the public work expenses were used to be disbursed from the ordinary account was because of the urgent necessity to improve the basis of industries in order to secure the free activity of the whole capital even if no returns were expected. Nevertheless under such circumstance where the improvement project of the basis of industries in themselves might bring forth any profit, it is needless to say that its construction in itself would pave the way for the more disorderliness on the part of government.

It is here that a new phenomenon may arise which will check the normal expansion of the basis of industries as a result of adverse reaction to the "efficient" improvement projects. These circumstances from the financial aspect now leads to the conclusions that on the one hand the various improvement projects of the basis of industries under the pretext of development would provide the hotbeds for social nuisances resulting in the expansion and reproduction of water shortage, ground sinking, spoiled air, excessive urban growth, traffic confusion, etc. and on the other spontaneous disasters would simply be left to chances, because the "development" projects would pay no heed to various construction works of disaster counter-measures, thus in either case resulting in demand of an enormous amount of financial expenditure. This extreme increase of both of these social and spontaneous disasters would result in unbearable drawbacks of requirements to multiply value even for the monopolised financial capital, especially the increase of circulation expenses and the deficiency of clear water, thus making it inevitable to expend in a more expanded and large-scaled financial disbursement.

Moreover, the factor that makes the financial expenditure greater for the purpose of "re-development" is the alarming rise in the land prices as result of the frightful investment on land. The land price rises suddenly

Table 3 The Index Number to show the Land Prices in Urban Areas in the Whole Country according to Classified Areas

	Commerical Area	Housing Area	Industrial Area	Average
1955 March	100	100	100	100
56	114	114	113	114
57	146	144	149	146
58	175	177	181	178
59	216	219	225	220
60	282	269	293	280
61	385	375	449	399
62	478	469	589	507

Source : *Construction White Papers* (1962), pp. 82-83.

most conspicuously in the case of land for industries and since the financial expenditure will have to cover this rising land price, it will be forced to expand its finance further (See Table 3).

Thus, the "efficient" management

which might appear to be an almighty plan to kill two birds by one stone — to solve not merely the problems of the financial crisis and crisis of loan capital at the same time — would only diametrically accelerate the financial crisis and aggravation of various production requirements of the financial capital; and once falling into such circumstances, it would become almost impossible to retrench the scale of finance.

Fourthly, out of this greater financial demand would spring the following contradictions, that is, there would be no other way than the increase of tax yields or the expansion of the sources of financial investment or loan.

Speaking of what had been covering the expanding financial demand, it was "natural increase" for the tax yields and the petroleum-tax for the road. The former could be secured only by continued economic expansion and chronic inflation. The device to guarantee the natural increase through increased tax-collection not by the entrenched finance but by the nominally increased income due to inflation would become an inevitable partner of the finance of the social overhead capital during the period of chronic expansion of such financial demand. For this reason the finance would remain always to be loose, and one-sided entrenchment of loans would become commonplace routine, and subsequently the chronic aggravation of international balance might likely be caused.

On the other hand the gasoline tax, covering most of the road expenses as its financial source, as far as the monopolised price of gasoline could be maintained and the tax involved could be passed back to the consumers, had come to have great bearings particularly on the transportation cost, and as inevitable result it couldn't help giving a bad effect to the national economy as a whole. In addition various types of social security funds have begun to play part to further additional taxpayment. At all events the chronic expansion-policy and inflation had brought unsound influences to the national economy as a whole, giving pressure upon people's living and resulting in the decreased international competitive strength.

Fifthly and lastly, speaking from the aspects of the execution and management of budget, the "efficiency" produces innumerable counter-products exactly in opposition to expectation. The availability of the elastic use of fund concurrently finds its own way to the increased funds free from the people's surveillance and the speculative use of them, thus resulting in the overflow of false prospective projects or draft plans under the cover of "efficient" calculation¹³⁾. Various kinds of "plans in the

Table 4 Japan National Railways
Accidents

	No. of Accidents	Killed during Operation of Trains
1930	8,052	9
1945	38,563	404
46	46,578	272
47	38,403	42
48	37,802	31
49	31,198	25
50	28,256	75
51	26,598	583
52	24,368	502
53	21,833	602
54	19,937	653
55	20,081	731
56	20,294	780
57	18,136	737
58	17,126	721
59	18,451	844
60	18,030	895
61	20,029	936
62	22,183	960

Source : Bureau of Statistics, Office of the Prime Minister, *Japan Statistical Yearbook*, No. 14, 1963, p. 534.

Table 5 Road Traffic Accident

Year	No. of Cases	Killed
1948	21,341	3,848
49	25,113	3,790
50	33,212	4,202
51	41,423	4,429
52	58,487	4,696
53	80,019	5,544
54	93,869	6,371
55	93,981	6,379
56	122,691	6,751
57	146,833	7,575
58	168,799	8,248
59	201,292	10,079
60	649,917	12,055
61	493,693	12,865
62	479,825	11,445

Source : Bureau of Statistics, Office of the Prime Minister, *Japan Statistical Yearbook*, No. 6, 1954 and No. 14, 1963.

- 11) As to these analysis see : K. Terao, "Social Capital & Independent Remunerative Management System", *Kansai University Essays on Business*, Vol. 7, No. 3, 1963. As to the first formulation of these phenomena, Y. Shima & K. Miyamoto(ed.), *Lecture Series on Loan Finance*, Vol. 3, Yuhikaku, 1961.
- 12) The method to create "new property value" as one measure for any local self-government to provide its own source of fund has been encouraged not only in this country but also in the U. S. A. "One possibility to increase return to any local government is to create a new property value in an area of re-production, and to collect a large amount of tax from such source. The possibility for a new method to raise fund for re-production activities by making loan on the presupposition of anticipated tax collection in future is now being tried in Sacramento, Calif." U. S. Chamber of Commerce (ed.), *Local Development Series*, Vol. 5; *Modernisation of Local Administration*.
- 13) It is of keen interest to note that the following quotations well point out what will be the result of the emphasis on the so-called investment efficiency: "..... no favourable appreciation whatsoever can be given to the prevailing effort to reduce all profits or expenses in terms of monetary unit, or ultimately in terms of ratio—'profit to expense'..... The prevailing trend seems to proceed to develop not so much usefulness as false figures." Civil Engineering Sub-Committee, Public Works Committee, Federated Council, Resource Bureau, Scientific Technique Department, *Study on the System of Public Works Budget*, Vol. 1, 1956.

making" or "policies" make their appearance as if they were bubbles, and they, defending for the highhanded organisations, proceed on their own way to play the game of competition and bribery.

In this way it is not in the system of budget but on the labourers who would be responsible for the operation of social instrument of labour and construction labourers that "rationalisation" could be put into practice, wherefore *the labour disasters* and the sudden increase of accidents would keep march along with social nuisances step by step. These are my last words on the finance of the social overhead capital (See Table 4).

(3) Postwar Japanese Capitalism and the Finance of Social Overhead Capital

To begin with rather what is above all the most basic economic situation, the first characteristic can be said to be composed of the fact that this country has been in a position to be developed by the U. S. A. as a market for military facilities as well as for commodities and capital on the one hand, and at the same time the fact that this country has also been in a position to develop her domestic market for her own domestic financial capital and to re-organize her national defence facilities under the subordinated military alliance because she had lost all her colonies she used to have on the other, and lastly the fact that these two entirely different and opposite situations have been most delicately interwoven. The first steps on the part to be developed were the postwar disarmament, the loan of military bases to the U. S. A. in the form of national properties, the command of petroleum capital such as 'combinart on seashore', railway construction making headway with sudden increase of automobile, proceedings of such industries as steel, electricity, railway, water works which include an enormous amount of foreign loans, and on the part to develop were agricultural development, land improvement and mountain as well as river counter-measures, etc. However, these two situations are distinguishable practically only within the limited scope of no autonomous development. It is true that the Japanese version of New Deal Policy has been supported as far as the reformation of Japanese agricultural system has remained to be one of the most important purports of the occupation policy and as far as urgent unemployment counter-measure and disaster counter-measure have been found to agree with the occupation force's policy to make this country self-supporting. However making the year 1954 as turning point, the policy to revive the monopolised capital had been placed on the track again and as soon as the more emphasis has been placed to develop market for American capital and commodities, the transition to the policy to assist the development of the basis of manufacturing industries has begun to take

place. Then the location where the industrial facilities should be established has come to be designated to make them suitable markets for foreign investment, petroleum capital, raw materials for heavy industries, technical partnership from abroad, etc., and finally the seashore industrial kombinat has been successfully completed by the 'petroleum priority energy', giving the most serious blow to the coal industry.

Second characteristic may be represented by the following facts — that the rationalisation process of the finance of the social overhead capital has come to be tied with the foreign capital, the utilisation of the counterpart fund and the introduction of foreign techniques on the one hand and the low labour cost, the aggravation of the terms of labour, and the process of development of the finance of social overhead capital to be followed by sudden increase of labour disasters on the other.

The third characteristics, which is a natural conclusion drawn from the forementioned two points, can be seen in the following facts, that the process of the construction of the social overhead capital characterised with impediment of autonomous development, advanced techniques and aggravated terms of labour, had to be followed by the ruin or withdrawal of agriculture and sudden rise of manufacturing industries, and the consequent disasters, the sudden increase of social nuisance and the expansion of urban districts due to the lack of orderliness on the part of government, because priority had to be given not so much to the kinds of works connected with agriculture and mountain-river control as the improvement works of the basis of industries on the one hand and far less weight to the problems of people's livelihood based on the low standard of living on the other.

Table 6 International Comparison of Administrative Investment

	Japan		U.S.A.	U. K.	France	Italy	Sweden
	1934-36 ¥ million	1960	1960 \$ million	1957 £ million	1957 Fran billion	1957 Lira billion	1957 Krone million
People's Total Expenditure (A)	16,736	12,748	441,659	21,921	20,520	15,627	52,592
Administrative Expenditure (B)	382	878.8	10,960	350	410	364	1,830
B/A	228	68.9	2.48	1.6	2.0	2.33	3.48
Administrative Investment in Terms of Yen (unit : million)	135,900	878,800	39,456	3,528	3,514	2,095	1,274

Source : Jin Miyazaki (ed.), *Public Works and its Finance*, Zaimu Shuppan, 1963, p. 16.

As its result disasters both spontaneous and social are taking place more and more frequently and seriously and it overwhelmingly has raised the importance of the specific gravity of the finance of social overhead capital of this country. However (See Table 3), a new phenomenon is coming into existence, proving that there are not sufficient funds available for any works connected with the people's livelihood mainly composed of the objects of the fixed consumption. Although these phenomena are more or less common to many countries, the reason why these phenomena have to come into existence in the extreme form particularly in Japanese capitalism is because, whenever the disorderliness on the part of government in itself is presenting the issue, the factors such as the impediment of autonomous development, the low labour cost, the aggravated labour terms and the sudden confiscation of agriculture, etc. would set the spur to such government to carry through its own disorderliness still further to the maximum extent. The military installations and the gigantic kombinats paying no regard whatsoever to surrounding living environment could be pointed out to symbolize this situation.

Traffic accidents, tragic disasters, water shortage, extreme rise of land prices, etc. are nothing other than the inevitable by-products of the construction of huge plants or factories. Thus, the conspicuously extravagant disbursement to the social overhead capital and the considerable drawbacks in the works connected with livelihood of the masses of this country could only be found in the light of combined results of the traditional elements such as the subordinated character, new techniques, the monopolised control, the low labour cost and the utilisation of the residues of the small-scale production.

Postscript

For this study a great deal of data and valuable hints have been given by the joint research of the members of the Finance Research Association, to which the present writer also belongs. He is greatly indebted to Professor Shima and many other members of the Association, and is totally held responsible for this manuscript. Should there be any theoretical contribution, it should all be attributed to the efforts of the members of the Association. (This study is part of the research achieved by the Science Research Fund 1963.)

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