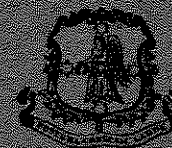


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The Financing of Developmental Works

BY
L. R. EAST



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No. 11

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THE FINANCING OF DEVELOPMENTAL WORKS

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L. R. EAST

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Victoria*

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THE FINANCING OF DEVELOPMENTAL WORKS

Introduction

IT is becoming increasingly evident that the end of the war, and the release of enormous manpower resources from the fighting services and from non-productive works associated with the manufacture of the weapons of war, will mark the beginning of an era of tremendous activity on developmental works. These works will not, at least at first, be restricted by financial limitations; for one of the results of the war has been that great numbers of the public believe that national undertakings can be financed to an almost unlimited extent by 'low-interest' loans or even by 'costless' national credit, or 'interest-free' money, and that, therefore, the rate of progress in post-war development should be limited only by manpower and material.

It is true to say that manpower and materials will be the limiting factors—for large-scale unemployment again is unthinkable—but it should be clearly understood that, whatever the system of finance, the community actually 'pays' for all work at the time it is carried out, in that it has to provide the food and clothing and other requirements of all those engaged on non-productive work and of their dependants. No production is, or can be, borrowed from the future. Even though works may be financed by 'loan,' they can be constructed only by the use of existing labour and existing materials.

The greater the proportion of the population engaged

Note: The views expressed in these pamphlets are those of the individual author in each case and are not necessarily endorsed by the Extension Board or the Faculty of Commerce.

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on non-productive work, the less must be the proportion producing food and clothing and other consumers' goods and services and, therefore, the lower the standard of living. Unless there are very complete statistics of production, the lowered standard of living will be evident to the public only by high prices or scarcity of goods—as during the present war emergency when so many workers have been diverted to the fighting services and the manufacture of munitions. Wages may appear high at present, but the real standard of living—including all sorts of items, such as heating, lighting, travel and recreation, as well as goods such as tea, sugar, confectionery, tobacco, clothing, toys, etc.—is much below pre-war standard. No increase in wages can increase the quantities of goods available if the whole working population is employed—as it now is.

If the object of post-war development is to raise the general standard of living of the whole community—and it should be—then it is essential that men should be engaged on non-productive works only to the extent that they cannot be employed on the production of consumers' goods and services, or on developmental works which—although temporarily non-productive—will, upon completion, result in the continuing production of new wealth.

The cost of all works should be thought of as 'man hours' and the quantities of 'material' required for their construction. In actual practice, it is more convenient to consider works in terms of money, but with the current ideas of 'costless' or 'cheap' money, it is easy to lose sight of the real position, which is that the carrying-out of any work involves the *diversion* of men and material from some other work which might have been undertaken, and which might actually be much more desirable or much more reproductive. People are apt to urge the expendi-

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ture of millions of pounds in the interest of development on projects which appear desirable, but which would give very low returns to the community, because they do not realize that the carrying out of such projects would deprive the community of equivalent other works which might be much more desirable.

Consider, for example, the 'piping' of the Mallee channels, or the replacement of thousands of miles of open channels with concrete pipes, which has been often urged by laymen in order to reduce channel maintenance costs and water losses. To really 'value' this proposal, which is estimated to cost £16,000,000, there should be set against it the houses, schools, universities, hospitals, swimming pools, roads, sewerage schemes, irrigation works, electric power installations, soil conservation and drainage works, farm improvements, and a host of other works which could be provided for £16,000,000 worth of labour and material. It will be noted that in this list have been included some works, such as schools, which are not directly reproductive, and some, such as irrigation, drainage and soil conservation, which could be very directly reproductive. All such works, however, are definitely desirable, and there does not appear to be any simple way of comparing their degrees of desirability. All that can be said is that the community can have all the desirable non-productive works which the returns from its reproductive works enable it to afford.

A work cannot be classed as reproductive unless it actually increases the overall ability of the community to produce goods, services or amenities. The Sydney harbour bridge, for example, is very definitely reproductive in that it effects very great savings, both in cost and in time of transportation of people and goods across the harbour, greatly reducing the quantities of materials, such as coal,

used for transportation, and releasing an enormous number of man-hours for either production or enjoyment.

Although in water conservation there are many 'non-productive aspects,' such as recreational values, to be considered, the State Rivers and Water Supply Commission, in planning the full beneficial utilization of the water resources of the state of Victoria, is concerned mainly with ascertaining whether proposed 'developmental' water supply works are really reproductive in the widest sense of that word, i.e., whether the net result of their construction will be a gain or a loss to the community as a whole. An undertaking that results in a gain to the community can undoubtedly be described as 'economically sound' from the national standpoint, although it may be that the distribution of costs and benefits is far from just. The cost of public works is seldom shared by individual taxpayers in proportion to the benefits they receive from the construction of these works.

Water Conservation

In the case of water conservation and irrigation undertakings, the requirements of the Water Acts, until 1937, were that the water users should contribute by rates and charges sufficient revenue to meet the full interest, redemption, depreciation, maintenance and management costs of all works except a few free headworks constructed many years previously and specified in the acts.

This sounded quite reasonable and was regarded as a 'business proposition.' It was said that those who received the benefit of the works should pay for the works. Yes! but no one would be so foolish as to say that the benefits of irrigation are confined to the irrigator. Far from it. One has only to look at the spectacular development of prosperous towns in irrigation districts, such as Shep-

parton, where land sold recently in a main business street at £100 a foot, to realize that there are very real benefits received by other sections of the community.

Irrigation districts receive from elsewhere a great volume of goods (inward rail freight at Shepparton alone in 1938-39 amounted to 35,864 tons), indicating that very real business benefits are being received in other parts of the state by manufacturers and suppliers of these goods. It is estimated that of the gross receipts for an irrigator's produce, four-fifths are expended on the purchase of manufactured goods or on payment for services rendered by other persons. The increased business due to irrigation development results inevitably in increased populations in the nearby country towns and in the metropolitan area, with consequent very great increases in total values of business and residential lands in these centres.

The real profits resulting from irrigation development lie, not in the sale of water, but in the increases in business activities and in land values resulting from that development—and these increases are not by any means confined to the farm lands on which irrigation is carried out. On the contrary, they are largely in the urban areas. To expect the irrigator to pay the full cost of water supply was, therefore, unsound—and it proved to be impossible.

In 1905 an attempt was made to place water supply on a business basis. In the Water Act of that year, revenue from both irrigation and waterworks districts was to be raised by a form of rating on the unimproved valuation of the properties supplied, and the minister in charge of the bill, the Hon. George Swinburne, stated in his second reading speech that the increase in revenue consequent upon the rise in land values that would result from irrigation would probably be sufficient by 1917 to make the irrigation scheme—he referred to the Goulburn-Loddon

Scheme—pay its way. It is possible that, had his proposed system of rating been adhered to, this result would have been achieved, for land values in these areas have been more than doubled and revenue would have increased proportionately. One of the advantages of Swinburne's system would have been its tendency to prevent excessive rises in land values; it would, therefore, have reduced speculation in irrigable lands.

Contrary to general belief, high land values for farming land are a very great handicap to the farming industry. So serious has been the effect of rising land values over many years that it is hardly an exaggeration to say that the farmer or grazier who has to purchase his land at the ruling market price for the district and has interest to meet on a substantial part of the purchase price, can never make more than the barest living.

E. H. Langford, secretary and economist to New Zealand's Minister of Supply, commenting on the effect of increasing land values on price stabilization, said recently:

One of the seemingly incurable variables is land values, and these fluctuations tend to destroy stabilization no matter how effective other price control machinery may be. Every increase in price to the producer has its effect. The enhanced land value immediately becomes an added capital cost and the increased profit margin is reduced.

With each increment, capitalization increases, and unless the movement in this part of the spiral is arrested a land boom ensues.

All increases in profit margins find their way into land values, and if these values are not stabilized by positive action, it becomes a never-ending process of internal price adjustment. It is likely that surplus income is being invested in property at the present. This creates a keen demand and values rise, reflecting themselves in rent and interest rates.

There can be no stability in rural areas while farmers look for their profits to increased land values instead of to the proceeds of the soil.

Many farmers in the past have been content to accept this condition and have struggled for twenty or thirty years in the confident expectation of being able to retire in due course on the proceeds of selling their farms at increased values—passing on the struggle to their successors.

J. B. Condliffe, an economist, and author of *New Zealand in the Making* (1929), said:

There is an extraordinary turnover of landholding in New Zealand. A careful estimate places the proportion of land that changed hands in the ten years 1915-24 as rather less than half the occupied area, even allowing for transfers. . . .

The farmers having pitted their judgment of speculative values against that of the financial experts, have been forced in recent years to realize that they have lost in the gamble. . . . Faced by this situation they display a very natural tendency to blame the Government, the banks, the merchants, the Arbitration Court, the trade unions, or anyone but themselves, for the financial straits into which their own speculative activities have brought them.

Mr. Swinburne's proposals for financing irrigation works in Victoria were considered difficult to apply and were never put into operation, for, under an amending act in 1909, the system of raising revenue for irrigation works was changed so that charges would be made on a quantitative basis at so much per acre foot. The system is simple and easy to administer, but it means that the owner of poor land that can produce comparatively little must pay for water just as much as the owner of very fertile land which may produce two or three times as much with the same quantity of water. The consequence of the flat charge is that the market value of the fertile land rises very much beyond what it would have reached had the water charge been based on land values—and the whole of this increase goes to the owner as soon as he sells the property. The Water Supply Authority gets no portion of the unearned increment, and the incoming farmer is usually so burdened with debt that he cannot afford to

develop the farm properly and also has difficulty in paying for the irrigation water without which the land would be almost useless.

The irrigation charge was intended to be of such amount as would, together with a domestic and stock rate, raise sufficient to meet all operating and capital charges. In this regard, however, it might be pointed out that when a state instrumentality is under direct government control, the power of ratepayers to oppose any upward revision of rates and charges to meet altering conditions is very great indeed, and although some increases were made after the last war during the period of rising costs (and prices) these increases were not proportionate to the increases in actual costs. With inflation of currency, wage rates have risen to maintain real wages at the 1907 level, but, as irrigation charges have not risen proportionately, the real value of the water supply revenue in man-hours of labour has fallen substantially.

The following table shows variations in the basic wage paid by the Commission and in the irrigation charge for water in the main districts supplied from the Goulburn System over the period 1907-1942:

YEAR	Basic wage per 8-hour day	Irrigation charge per acre foot
1907	7s. 0d.	—
1912	8s. 9d.	5s.
1917	9s. 6d.	5s.
1922	13s. 9d.	6s.
1927	14s. 9d.	6s.
1932	11s. 2d.	6s.
1937	12s. 3d.	6s.
1942	15s. 6d.	6s.

As a result of the increasing disparity between irrigation

charges and maintenance costs, deficits increased rapidly in all districts and the whole position was reviewed by a Royal Commission on Water Supply in 1936.

Following the recommendations of the Royal Commission, parliament approved of the transfer from the water users to the state of the whole of the capital liability in respect of main storages and what may be termed head-works, as well as portion of the cost of distributary works. Water users are now required to meet only maintenance and operating costs, together with interest and redemption on a relatively small portion of the capital cost of distributary works.

The total loan liability at 30 June 1942 of the state of Victoria, in respect of waterworks, was practically £27,920,000, so that, with £3,437,000 granted from unemployment relief funds, the total expenditure on water supply, flood protection and drainage works has been £31,357,000. Interest and redemption charges on £25,000,000 are borne by the state, and on £6,150,000 by water users, who, except in a few marginal areas, also meet operation and maintenance costs.

It will be seen that, although at the inception of state water supply undertakings in Victoria it was intended that the water users should meet the full cost of constructing and operating works, experience has been that, by force of circumstances, the state has had to accept responsibility for four-fifths of the capital cost. Generally speaking, the rates and charges which the water users are required to pay are such that the surplus revenue over operation and maintenance costs is sufficient to meet interest and redemption charges on only one-fifth of the capital cost of the works. Including operating and capital charges, it can be said that for every £1 the water user is

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required to pay, the state contributes £2, which, of course, is met by the general taxpayers of the state.

This distribution of the cost of developmental works of water supply, flood protection and drainage in the proportion of one-third to the direct beneficiaries and two-thirds to the general taxpayers of the state, has not been the result of logically considered, or even arbitrary, apportionment, but has resulted from the operation of fortuitous circumstances.

I might mention here that only in marginal areas are ratepayers failing to pay the full amount of the rates and charges levied for water services, and that revenue from country water supply undertakings has increased from £472,000 to £743,000 over the past eight years.

Roads and Railways

A somewhat similar story to that of water supply could be told of the gradual transference of the cost of roads and bridges from the road users to local property owners and from them to the state, which recoups itself from special fees and taxes by no means closely proportioned to the benefits received by those who make the payments. It is estimated that for every £1 expended on roads and bridges by municipal authorities in Victoria, from local rates, the state, through the Country Roads Board or by grants, spends another £1.

In the case of railways, too, the state is bearing interest and redemption charges on approximately two-fifths of the capital liability incurred on works and equipment, having transferred to the state account some £29,000,000 of the liability and, by act of parliament, having from time to time absolved from 'betterment rates' the proprietors of lands served by many lines, such as the Glen

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Waverley, Alvie, Noojee, Triholm and others, which were constructed at their request, and upon their undertaking to contribute to the cost by such betterment rates. In only too many cases the original owners, who asked for the lines and agreed to pay the rates, sold out at enhanced prices to settlers who, having paid for the railway advantages in high land prices, found the local railway betterment rate particularly burdensome, and protested that they were being asked to pay local rates for advantages which were for other sections of the community without special charge.

Future Developmental Works

As has been indicated, the community has been obliged by force of circumstances to accept responsibility for a substantial proportion of the cost of water conservation, flood protection, drainage and other developmental works which have been carried out in the past. Although this responsibility was not anticipated by the state in regard to water conservation, it cannot be said that it has been accepted unwillingly, for all sections of the community have recognized for many years the very great indirect benefits of these works, and all political parties have had progressive policies in regard to further development. Nevertheless, it must be admitted that the works were originally planned and approved as business propositions in connection with which those receiving direct benefits would meet all costs.

This comfortable belief is no longer possible, and for the past ten or a dozen years the greater part of financial provision for new developmental works has been made by what were frankly admitted to be free grants from unemployment relief funds—the beneficiaries being required to meet maintenance costs only. Some three and

a quarter million pounds have been provided for water supply, flood protection and drainage works in this way over this period.

As a result of this method of financing by grant—which the state has adopted to meet the acute unemployment problem during the world depression—a great deal was done in the way of carrying out work, which, although very urgently required and definitely reproductive, could never have been undertaken in the ordinary way.

Although the state has acquired valuable assets from most of this expenditure, it was most difficult at the time, under the emergency conditions that existed, to assess the relative merits of the many proposals which were submitted for consideration as 'desirable works of a reproductive nature suitable for carrying out under unemployment relief conditions.'

The urgent need for work for many thousands of unemployed precluded detailed investigation of the hundreds of proposals, such as is given by the parliamentary Public Works Committee, and the approval or rejection of proposals had to be largely a matter of judgment after consideration of a brief statement of the merits of the various proposals. It was seldom possible to present detailed estimates of benefits and costs.

As far as water conservation is concerned, and probably most other developmental works, it is hardly likely that it will be possible to present post-war proposals as business propositions to be paid for in full by the water users, and if such works are to be heavily subsidized by the community, it is evident that there will be a wild scramble for local works to be carried out in every part of the state.

It is desirable, therefore, that a system of classification of developmental works should be evolved so that the relative merits of all proposals can be readily compared.

Classification of Developmental Works

In order to permit classification of developmental projects, it is desirable that the basis of classification should be generally accepted, and an endeavour will, therefore, be made to set up criteria which could have general application to all kinds of reproductive works.

(a) *Profitable Undertakings.* In the following remarks, the term 'profitable' is used only to imply that there would be more to be gained (or less to be lost) as a result of proceeding with the undertaking than as a result of refraining from or discontinuing it. The term is not used in the sense that any fixed obligations in regard to interest will be met or any dividends paid in respect of capital liabilities already incurred. Having in mind these limitations of the term 'profitable,' the following criteria are suggested:

- (i) An undertaking is profitable to the individual if the net return to him is greater than the amount other persons are prepared to pay for his personal services, plus bank interest—say $3\frac{1}{2}\%$ —on the amount he could obtain by the sale in the open market of his assets in the undertaking.
- (ii) An undertaking is profitable to the state if the resulting increase in state revenue exceeds the annual cost to the state. The increase in state revenue comes in very many ways—some direct but mostly indirect—and can be determined only approximately. It is estimated that under pre-war conditions state and federal revenues combined amounted to about two-fifths of total production, this revenue being approximately equally divided between state and Commonwealth.

It is considered, therefore, that a national undertaking is profitable to the state and the Commonwealth if it results in an increase in production amounting to approximately two and a half times the annual cost. It would be profitable to the state if the increase in production exceeded five times the annual cost to the state.

- (iii) An undertaking is profitable to the community if it results in the production of more wealth than is used up in the establishment and operation of the undertaking. The undertaking begins to be profitable when the total amount of new wealth produced has exceeded the total amount of wealth consumed in establishment and operation.

Land values are not wealth in the economic sense, although increases in land values may serve as an indication that an undertaking is profitable to the community. The ownership of land consists of the legal right to receive a share of the wealth which can be produced by labour on that land, present and future, and land value is simply the capitalized value of that share. The carrying out of public works, such as roads, railways and water supply, makes possible increased production from land, or more intensive use of land, and, as practically the whole advantage goes to the owner—as distinct from the worker engaged on production—this advantage is capitalized in increased land value.

Our great prime minister, Winston Churchill, gave a considerable amount of attention to the land problem earlier in his career. In the course of a speech at Edinburgh on this subject, he said:

A portion, in some cases the whole, of every benefit which is laboriously acquired by the community is represented in the land value.

If the opening of a new railway or a new tramway, or the institution of an improved service of workmen's trains, or a lowering of fares, or a new invention, or any other public convenience affords a benefit to the workers in any particular district, it becomes easier for them to live, and therefore the landlord and the ground landlord, one on top of the other, are able to charge them more for the privilege of living there.

Reverting to the classification of public works, it might also be pointed out that the making of so-called free grants towards the capital cost of an undertaking cannot convert an unprofitable enterprise into a profitable one as far as the state or the community is concerned, although it may

do so for the individuals comprising the section of the community directly benefiting by the works.

(b) *Relative Desirability*. For the present purpose it is not necessary to determine the relative desirability of undertakings as far as the individual is concerned, for in practically all circumstances the advantages will, in a relatively short period of years, be absorbed in increased land values, and the producer will receive little, if any, more for his labour than the average worker in the industry concerned. The objective of public expenditure should not be to boost land values for the benefit of a few individuals, and the state should, therefore, endeavour to distribute the benefits of any national undertaking as widely as possible so long as the producers concerned are able to maintain a reasonable standard of living. Taxation to meet the cost of public expenditure lowers the standard of living of the taxpayers, and it would be unreasonable if those who received the benefits were enabled to reap excessive profits at the expense of the community.

As far as the state of Victoria is concerned, relative desirability of public undertakings may be measured by the relationship between gross production resulting from the undertakings and annual cost to the state, and may be expressed very approximately in a simple formula:

$$\text{Desirability to state} = \frac{\text{One-fifth of value of gross production at farm or factory}}{\text{Annual cost to state}}$$

Where one-fifth of gross production is equal to the annual cost to the state, the 'desirability' would be unity, indicating that there would be neither gain nor loss as far as state finances were concerned. Where the result is less than unity, there would be a loss, and where the result is greater than unity, there would be a gain to state

finances. The factor 'one-fifth' is, of course, subject to variation from time to time, and should be periodically reviewed in the light of changing rates and incidence of taxation.

As already pointed out, the Commonwealth revenues benefit from increases in production, and it would be quite reasonable for the Commonwealth to contribute to the cost of developmental undertakings in proportion to the relative increases in Commonwealth and state revenues.

As far as the community is concerned, relative desirability of public undertakings may be expressed as the relationship between the new wealth produced and the wealth consumed, and, because much wealth will be consumed in constructing works before there can be any new wealth produced, it is necessary that a time factor be introduced:

$$\text{Desirability to Community at end of } n\text{th year} \left. \vphantom{\begin{matrix} \text{Desirability to} \\ \text{Community at end of} \\ \text{nth year} \end{matrix}} \right\} = \frac{\text{Wealth produced to end of } n\text{th year}}{\left. \begin{matrix} \text{Wealth consumed in} \\ \text{construction} \end{matrix} \right\} \text{ plus } \left\{ \begin{matrix} \text{wealth consumed in} \\ \text{maintenance and} \\ \text{operation to end of} \\ \text{nth year} \end{matrix} \right.}$$

Non-governmental Industries and Taxation

In considering the financing of developmental works of the kind generally termed 'public works,' we must not lose sight of the fact that practically all undertakings engaged in production—whether publicly or privately financed—contribute to the national well-being and the public revenues. Unless the return to the state from public developmental works is sufficient to offset the cost, they can be financed only by penalizing, through taxation, non-governmental industries which have been established by private enterprise without assistance from public revenues.

Taxation of a private enterprise is equivalent to a

lump sum levy of, say, twenty-five times the annual tax. If an industry, which has cost £100,000 to establish and bring into production, pays in taxation £4,000 per year, this tax is equivalent, if capitalized at 4 per cent., to an addition to the capital liability of the business of a further £100,000.

Practically all taxation is in the last resort paid from production, so that it would not be incorrect to say that any subsidy made by the government to encourage or increase production in an undertaking—public or private—which is actually unprofitable to state revenue involves an equivalent burden on other industries engaged in production, and usually increases the prices of the products of those industries; as with most forms of taxation the taxes are passed on to the consumer. In the case of the workers whose wages are varied with the cost of living, the cost is passed back to industry, and so the vicious circle goes on. It is, therefore, most important that close attention be given to the relationship between prospective production and estimated cost before approval is given to any undertaking requiring assistance from the state for its establishment.

Finance

The classification of post-war developmental proposals and their arrangement in order of priority leads to the very difficult problem of finance. It is probable that, for some years after the war, very large numbers of men will be available for developmental works, and if they can be employed there will be extraordinarily rapid development of the state. The expenditure involved will, however, be colossal, and careful consideration should, therefore, be given to financial policy in regard to public works. Some notes on methods which have already been applied to large

scale works in various parts of the world will, therefore, be of interest.

(a) *Assuan Dam*. The great Assuan Dam, which supplies the Nile valley, was financed by an increase of £0.5 per acre in the land tax over a very large area which received supplementary summer irrigations from the reservoir. The cost of the reservoir was given in 1913 as £4,220,000. Its capacity was 2,425 million cubic metres (1,966,000 acre feet), and it was stated that each 1,000 million metres (810,000 acre feet) was sufficient for the irrigation of 450,000 acres. The increase in land tax from this area was £225,000, and the indirect benefits to revenue were estimated to amount to as much as £275,000. At these rates, the total return to the treasury from the reservoir would be nearly £1,250,000 per annum in a year when all the water was used.

(b) *Sydney Harbour Bridge*. Part of the cost of the Sydney harbour bridge was met by a 'betterment tax' on land values. This betterment tax was to be discontinued when one-third of the capital cost had been paid and an additional sum accumulated to meet in perpetuity one-third of the cost of maintenance. The construction of the bridge increased the 'desirability' or 'attractiveness' of land for residential and business purposes and greatly extended the residential limits for 'Sydney workers,' and, as a consequence, it was expected that there would be a marked increase in overall land values over a wide area.

However, the opening of the bridge coincided with the world depression and receipts from the betterment tax, which had risen from £114,768 in 1923 to £194,651 in 1930, fell by 1932 to £157,204. Property owners, particularly those who were speculating in land subdivisions and were unable to dispose of their holdings, complained that they were unable to receive the benefits they expected,

and were successful in having the rate reduced in 1933 and again in 1936. In 1938 it was discontinued altogether after approximately £2,400,000 had been raised towards the total capital cost of £9,878,624.

Some 45,000,000 travellers crossed the bridge in 1939-40, and the tolls paid amounted to £382,000. Nevertheless, owing to the elimination of the betterment tax, the annual operations of the bridge showed a loss of £35,000. The toll system is popular with property owners, but cannot be regarded with any great degree of satisfaction in a modern community.

(c) *River Murray Works*. In the case of the River Murray works, costing £12,000,000, the contribution of £3,000,000 from the Commonwealth has been mostly from revenue, while the similar contributions by the three states of New South Wales, Victoria and South Australia have been made from loans. No direct charges are made on property owners or others in respect of the River Murray works, and the annual costs of the states—the Commonwealth does not contribute towards maintenance—are met from consolidated revenue. The completion of the Hume reservoir and other River Murray works have, however, enabled assured supplies of water to be maintained along the river, particularly in dry seasons, with consequent direct benefit to state revenues from water sales in irrigation districts.

(d) *United States Reclamation Works*. The United States government committed itself from the outset to financing construction of federal reclamation projects, i.e., irrigation undertakings, on an *interest free* basis during the period allotted to settlers for repayment. Such waiver of interest was considered to be a just and reasonable compensation for support of large developmental enterprises which are deemed advantageous to the general

public. Certain definite fundamental principles were embodied in the original Reclamation Act of 1902. The act provided that the moneys used by the reclamation service for reclaiming arid and semi-arid land by irrigation should not be raised by taxation. At first these moneys were derived from the sale of public lands in the states to be benefited. Later, moneys derived from the royalties from oil and potash lands were added, and more recently they have been supplemented by special appropriations to permit of the construction of such colossal works as the Boulder and Grand Coulee dams.

The act provided that the moneys in the fund should not be lost, but should be of a revolving character, so that the service of the fund might be continuous. This is accomplished by the provision that those who settle upon the reclaimed lands shall be required to repay, in installments and *without interest*, the money which has been expended in the building of the engineering structures necessary to make water available to the farmer. The cash collected by the government as reimbursement for construction of one project becomes capital for the construction of another project.

On nearly all the projects a considerable percentage of the land was privately owned. In many cases the owners of the land capitalized the government's expenditures and the liberality of its terms of repayment by selling the lands to the settlers at much higher prices than could otherwise have been obtained. The benefits of the reclamation act, therefore, went in such cases almost entirely to these speculative owners, and an obligation of paying interest on inflated land prices was imposed upon the settler, in addition to his other burdens.

The following extracts from an official report, submitted to the United States government by the Bureau of Recla-

mation in 1929, are of particular interest insofar as they refer to the extension of the range of practicable projects:

By the strict canons of private enterprise each reclamation project . . . would need to show a net return in excess of all costs, including interest on construction. A sound public policy does indeed recognize the importance of the relation between net returns and cost and will hesitate to enter upon an enterprise where the deficit is excessive. But it also takes into account other items, such as the social value of a settled agricultural community to the population of the adjacent grazing or mineral lands, the contribution of the irrigated lands to the maintenance of schools, churches, roads, railways. When these and other general benefits are properly evaluated, the reclamation policy of the Federal Government has been fully justified by its results.

The Government, in adopting the principle of repayment of construction charges over a period of years without interest greatly extended the range of practicable projects.

Considerations lead to the conclusion that perhaps the Government is pursuing too narrow a policy in restricting construction for water conservation to works which can be paid for in a given period of time—20 to 40 years—by charges upon the irrigated lands benefited, and further, to works that can be financed out of the limited reclamation fund. Very little of the Federal work on flood control, river navigation or harbour development could have been undertaken if the principle of financing through charges for specific benefits had been followed.

(e) *United States Anti-Speculation Law.* The Anti-Speculation Act of 1937 was designed to protect settlers in the Columbia Basin project from speculative land prices and to provide opportunities for many farm homes by limiting land ownership to specified maximum areas. The act requires land owners to agree to sell holdings over this limit at a fair government-appraised price; denies water to holdings over this limit, and to land over this limit sold for more than the fair government-appraised price; requires fair, impartial appraisal of privately-owned lands within the irrigable area at present day market value without reference to proposed irrigation works. The act does not deprive any land owner of his rights to buy or

sell freely at any price. This is the land owner's inherent right. However, unless the land owner contracts with the government to comply with the provisions of the act, water cannot be supplied him.

The Columbia Basin project—the main work of which is the Grand Coulee Dam—embraces an area of $2\frac{1}{2}$ million acres in eastern Washington. Of this total area, about one-half, or 1,200,000 acres, is estimated to be irrigable, that is, suitable for irrigation farming. Appraisals of the irrigable lands are based on the land's 'non-irrigated' value—the earning power of the land—determined by its character and use, without reference to the prospects of irrigation.

When the bill was introduced in the Senate Committee on Irrigation and Reclamation, in 1937, it was accompanied by a statement from President Roosevelt, who wrote:

A tremendous benefit will accrue to the Northwest by the building of Grand Coulee Dam and power plant, and the Columbia Basin irrigation project. I am in favour of the Federal Government providing adequate funds so that the construction at Grand Coulee may proceed in an efficient manner and without delay.

Nevertheless, it is only fair that I should tell you that before the appropriation of funds for the construction of Grand Coulee Dam as a high structure, it is my thought that the Congress assure itself of complete control over the lands in the Columbia Basin which would be irrigated.

I know that you will agree with me that it is unthinkable that real-estate profits should accrue to private individuals solely because of this great Government work.

Therefore, in my judgment, construction of the high dam should be dependent on the elimination of private profits, speculative or otherwise, which would result from this proposed action by the Federal Government.

(f) *National Planning in Great Britain.* Recommendations for the future control of land development which, if adopted by parliament, will ultimately affect a large number of industrial as well as private property owners,

are contained in the final report of the Committee on Compensation and Betterment, presided over by Mr. Justice Uthwatt and more usually known by his name. The committee was set up in January, 1941, by Lord Reith, then Minister of Works and Buildings, and had as its primary object the prevention of speculation in the land likely to be included in post-war schemes for reconstruction.

In their interim report, published in July, 1941, the committee recommended that a Central Planning Authority should be constituted, with power to control building and other development work throughout the country; a proposal which, Lord Reith stated in the house of lords on 17 July 1941, the government had accepted. In their final report, the committee put forward recommendations to provide a basis on which national planning is intended to be a permanent feature of the internal administration of the country, and that the Central Planning Authority will bring to it 'a high degree of initiation and control,' based on organized research and backed by the national resources.

The main recommendation, relating to land outside of built-up areas, is that the state should acquire all 'rights of development' in such land (with certain exceptions) on payment of fair compensation; that the compensation should be fixed as a single sum for the whole country and divided among land owners in proportion to the 'development values' of their land at 31 March 1939; and that the acquisition of development rights should be coupled with power to acquire the land itself when it is wanted for public purposes or for approved private development.

On the subject of the collection of betterment the committee recommended a periodical levy—75 per cent is suggested—on the increases in annual site values.

(g) *Victorian Railways.* A member of the Victorian legislative council, a number of years ago, published a pamphlet dealing with railway problems and suggested that the interest charge on state railways should be met from the proceeds of the land value tax and that railway fares and freights should then be reduced by the full measure of the tax. He estimated that—even allowing for an exemption on unimproved land values up to £500—fares and freights could then be reduced by some 25 per cent.

This reduction would undoubtedly have been of marked advantage to primary producers and to other country dwellers who are very greatly affected by freight charges which reduce their returns from all they sell and increase the cost of all they buy. Reductions in rail fares and freights would also reduce the ability of road hauliers to compete with the railways over long distances where loading and delivery costs do not represent a large proportion of the total cost of transportation.

(h) *Canada-Winnipeg Water Supply.* The idea of meeting capital charges from a special tax on land values is not new, as this principle was adopted in Canada as long ago as 1912, when a water corporation was established by legislation to supply water in bulk to the municipalities comprising the greater Winnipeg water district. The works cost approximately \$17,000,000 and, from 1912 to 1927, the whole of the revenue required to pay interest and sinking fund was raised by a special levy or rate on land values, exclusive of improvements, of all of the lands within the district. The charge for water in bulk was very low indeed, being based on maintenance, operation and management costs only. In 1927 the act was amended, to allow the direct charge for water to be raised to 5 cents per 1,000 gallons, but even with this

charge nearly three-quarters of the total revenue is received from the land value levy.

Post-war Development

In order that the financing of post-war developmental works should be placed from the outset on a systematic rather than a haphazard basis, it is recommended that capital liabilities in regard to all state developmental works—past and future—might with advantage be grouped in a single account to be known as the State Development Account—with, of course, appropriate subdivisions for the various activities such as water conservation, roads, railways, regional planning, soil conservation, etc.—and that interest charges might well be met from a special tax designed to distribute as equitably as possible the cost of developmental works over the owners of properties benefiting both directly and indirectly from the works.

If all developmental works were included in the proposal, then a uniform tax on land values without graduation and without exemption would effect the fairer distribution of cost. Such a tax would be properly called the State Development Tax. It would be simple to assess, and impossible to evade. It would not penalize industry or increase the cost of living, but it would reduce land speculation and it would transfer a good deal of the burden of taxation from rural industries and farms, where land values are relatively low, to the cities, where land values go to thousands of pounds per foot frontage or hundreds of thousands of pounds per acre.

Sir John Grey, Prime Minister of New Zealand, said many years ago:

It is perfectly just that land improved by public works, and increased in value by the competition for land arising from a dense population, should bear a share of taxation.

The levying of a state development tax would, of course,

involve the abolition of the present land tax, and also the reduction of other forms of state rates and taxes, including water rates, rail freights, motor registration fees, etc., to the extent that they provide for interest on capital expenditure. The outstanding advantage of a state development tax on land values is that revenue from the tax would automatically expand to meet the increasing cost of financing new developmental works, expenditure on which, if they were truly developmental and profitable as already defined, would be reflected in increases in land values in town and country at least equal to the total expenditure.

Summary and Conclusions

1. The end of the war will mark the commencement of an era of tremendous activity on developmental works.
2. The community can have all the desirable non-productive works that the returns from its reproductive works enable it to afford—and no more.
3. The greater the proportion of the population engaged on non-productive work the lower the standard of living.
4. The real cost of any work should be thought of as man-hours of labour and quantities of material diverted from some other work.
5. An undertaking that results in a gain to the community can be described as economically sound from the national standpoint, although the distribution of costs and benefits may be far from just.
6. The cost of public works is seldom shared by individual taxpayers in proportion to the benefits they receive from the construction of these works.
7. The real profits resulting from irrigation development lie, not in the sale of water, but in the increase

in business activities and in land values resulting from that development—and these increases are by no means confined to the farm lands on which irrigation is carried out. On the contrary, they are largely in the urban areas.

8. To expect the irrigator to pay the full cost of water supply is unsound—and has proved to be impossible.
9. In Victoria, the state has had to accept responsibility for four-fifths of the capital cost of water supply works.
10. An undertaking is profitable to the state if the resulting increase in state revenue exceeds the annual cost to the state, and this will probably be so if the undertaking makes possible increases in production valued at more than five times the annual cost of the undertaking.
11. An undertaking is profitable to the community if it results in the production of more wealth than is used up in the establishment and operation of the undertaking.
12. For the purpose of comparing developmental proposals, relative 'desirability' can be expressed in a simple formula relating gross production at farm or factory to annual cost to state.
13. Unless the return to the state from public developmental works is sufficient to offset the cost, they can be financed only by penalizing, through taxation, non-governmental industries which have been established by private enterprise without assistance from public revenues.
14. Large-scale national planning will be found to be impossible if the practicability of each separate developmental undertaking is judged by its ability to return its cost to the state from rates and charges

levied only on those receiving direct benefit from the undertaking.

15. It is essential for the community to re-think its attitude towards public expenditure on developmental works, and to decide whether it can afford to subsidize such works largely for the benefit of the limited section of the community which receives practically the whole benefit in unearned increment. Unearned fortunes are made only at the expense of the community.
16. A slowing down or cessation of development is unthinkable, and the acceptance of stagnation because of adherence to old-fashioned principles of national finance and taxation propounded in text-books written long before large-scale utilities were considered a proper field for state operation is out of the question.
17. In order to extend the range of practicable developmental projects, it will be necessary for the community to adopt some form of financial policy which will enable the capital cost of works to be shared by the whole community.
18. It is considered that all expenditure on state developmental work, past and future, might well be grouped under an account to be known as the State Development Account, and that all interest charges might be met from a State Development Tax.
19. To distribute as equitably as possible the cost of developmental works over the owners of properties benefiting from the works, such a tax should be a uniform tax on land values without graduation and without exemption. The present state land tax would be abolished and certain other rates and taxes, such as water rates, rail freights, motor registration fees,

etc., reduced to the extent that they provide for interest on cost of developmental works.

20. Revenue from a development tax of this kind would automatically expand to meet increasing cost of additional developmental works to an almost unlimited extent provided the works were truly reproductive, as all such works result in increases in land values approximating to or exceeding the actual expenditure incurred on the works.

These comments and suggestions are submitted to provide a basis for discussion on the problem of financing post-war developmental works, about which no definite policy or clearly defined views have yet been stated or expressed.

THE UNIVERSITY EXTENSION BOARD

The lecture printed in this pamphlet is one of a series on *Realities of Reconstruction* arranged by the University Extension Board with the help of the University Commerce Department and delivered at the University during second term 1943. The functions of the University Extension Board are not always very clearly understood by members of the general public and a word or two of explanation may be in place here.

The University Extension Board may be broadly described as the Public Relations Department of the University. Its function is to attempt to extend the influence of University teaching outside the walls of the University. It provides a public platform from which University teachers and others may deliver the results of their experience and investigations to the public, outside of the University class room. The Board believes that it is performing a very useful function, especially at the present time, in helping to put before the public some at least of the facts which are of the greatest importance in formulating reconstruction policy. The success or failure of any plans for reconstruction will depend on the intelligent understanding and acceptance of them by the citizens of the Commonwealth and the need for public education on the issues involved is very apparent to-day.

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