STATE BORROWING, AND SINKING FUNDS FOR THE REDEMPTION OF STATE DEBTS, REGARDED FROM AN ECONOMICAL POINT OF VIEW.

By R. M. Johnston, I.S.O., F.S.S (Read June 16th, 1908.)

PART I.—STATE BORROWING.

The success of young colonies, such as those of Australia, has, in a large measure been due to the sacrifices which the earlier pioneers made, from time to time, in making timely provision for the opening up of Australia's vast virgin lands, by means of roads, railways, bridges, jetties, harbours, etc., in advance of actual occupation or settlement.

To any thoughtful person it is obvious, at the initial stage of a colony's history, it would be impossible to construct such costly undertakings without the aid of foreign capital.

Since the year 1842 the six states of Australia have practically entered into partnership with foreign capitalists in this important work of providing railways, roads, bridges, harbours, in advance of further settlement, and in no other way would it be possible to have succeeded in making the outlay of £240,149,727, in a period of 64 years, or at the rate of £5,024,000 per annum.

The following is a brief statement showing how this large amount of borrowed capital was invested:—

HOW BORROWED CAPITAL WAS INVESTED BY THE STATES.

Invested in	AMOUNT £.	PER CENT.
Railways and Tramways	141,271,521	58.83
Telegraphs	3.752.942	1.26
Roads, Bridges, Lights, Harbours, etc.	25 387,083	10 57
Water Supply and Sewerage	30,093.318	12.23
Defences	2.409 893	1.01
Other Public Works and Services	28 093,589	11.74
Unexpended balance	9.041.381	3 76
	£240.149.727	100

Has Australia benefited by this Borrowing of £240,149,727, or, what may be more properly termed—Taking into Partnership a Foreign Capitalist in a profitable undertaking?

The best answer to this query is to contrast the year 1870 with the year 1906-7, within which time the bulk of the Debt was contracted, as shown in the following table:—

PARTICULARS.	1870	1906–7	INCREASE.	ANNUAL RATE.
Population	1,652,000	4.197.038	2,543,038	2.25
Ex-Australian Ex-				
ports	£ 26 253 000	69,794 000	43,541.000	2.75
Sheep	41,639 000	83.798 893	42,159.893	1.96
Cattle	4,278,000	8,636,360	4.358,360	I 97
Railways-				
Miles Open	994	14 067	13 073	
Invested Capital	£9,829,000	£140 707 404	130 878,404	7.63
Profit on Work-				
ing per head	5s. 7d	30s. 1d	24s 6d.	
Interest on Debt				
per head	17S 2d.	41s 10d.	24s 8d.	
Taxation per head	47s. Sd.	66s. 7d.	18s. 11d.	
Taxation, less profit				
on Working of				
Railways		36s 6d.		
Public Debt	£28,328,000	£240,148,727	£211,820,727	9.11
Income of the				
People—				
Estimated Annual				
Value Mil. £'s.	72.32	193.90	121.58	2.77
Capital Value				
Mil. £'s.	2,066.28	5,540.08	3 473.80	2.77
Ditto after deduct-				
ing the whole of				
Public Debt				
Mils. £'s.	2,037.95	5,299.93	3,267 91	2.40
Ex-Australian				
Trade—				
Total Imports and				(
Exports Mils £'s.	36.09	114 52	78.43	3.50

A careful study of the contrast in the conditions of the Six States of the Commonwealth between the years 1870 and 1906-7, covering a period of 36 years in all, should convince all pessimistic observers that the past policy of entering into partnership with foreign capitalists to the extent of 240 million pounds, instead of being a mistake or a hindrance to Australia's financial and industrial development and progress, has been the principal means whereby our present conditions, con-

trasted with the former period, has in every way so markedly improved.

It may be of advantage to summarise some of the features which have led to this most satisfactory result:—

SUMMARY OF RESULTS.

- POPULATION.—The population has increased from 1.65 millions to 4.19 millions, or 2.59 fold.
- TOTAL EXTERNAL TRADE.—The total Imports and Exports (Ex-Australian) has increased from 36.09 million pounds to 114.52 million pounds, or 3.17 fold.

RAILWAYS:-

- MILEAGE WORKING.—The miles open of Railways in the six States has increased from 994 miles to 14,067 miles, or 14.15 fold.
- CAPITAL INVESTED.—The capital invested in construction and equipment of State Government lines has increased from 9.82 million pounds to 140.70 million pounds, or 7.63 fold.
- PROFIT ON WORKING.—The profit on working all State Railways has increased from 5s. 7d. per head to 30s. 1d., or 5.39 fold.
- INTEREST BURDEN ON STATE DEBTS.—The interest burden on all State debts increased from 17s. 3d. per head to 41s. 10d., or 2.43 fold.
- INTEREST BURDEN ON ALL STATE DEBTS, LESS amount from profit on the working of State railways alone, increased from 11s. 7d. per head to 11s. 9d., or increase of 2d. per head.

Notwithstanding that Total Interest Burden on all State debts has increased by 24s. 8d. per head, such has been the increase in the profitable working of the State railways alone—viz., 24s. 6d. per head—that the total interest burden connected with the Total Debt of 240.14 million pounds has only been raised by 2d. per head. That is, the profits to the State Treasuries from working railways (apart from the immeasurable material benefit of opening up the lands by the cheap and rapid mode of transit and communication have already almost wholly wiped off the taxpayers' interest burden on the

whole of the accumulated unredeemed Debt of 240.14 million pounds.

The fundamental error in the views of certain critics. who lack expert knowledge of matters pertaining to the economics of State finance as applied to the Australian States, is the evident common failure to appreciate the scope of the functions of the general governments of the various States of Australia as compared with those of the United Kingdom, and fail to discern the important distinction between debts incurred for purposes of protection or aggressive warfare and capital investments (also bearing the name Public Debt) incurred and expended in improving and permanently enhancing the value of the Public estate by means of railways, roads, and harbours. In the self-governing States of Australia, the scope of general government—owing to the peculiar conditions of lands thinly populated with vast undeveloped areas-embraces many functions which, in the earlier stages of development, would be impossible to resign either to local bodies or to private enterprise as in the older more densely-populated countries

Unless this fundamental distinction of the scope of the general government in old and new countries be thoroughly considered and allowed for, all comparisons relating to the proportion and Cost of Public Services and public debt between countries so differently conditioned would be worse than useless. In the United Kingdom the greater part of these services (70.89 per cent.) is left to private enterprise (railways) and to local government.

Only 29.11 per cent. of the Total Debt for all such purposes in the United Kingdom comes directly within the scope of the revenue and expenditure of the Imperial Government. In Australia as much as 93.74 per cent. of such functions come directly within the scope of the responsibility of the general government of the various States.

This is best appreciated by contrasting the proportion of Loans or Capital expenditure incurred under the general functions of government in respect of special public works and services in Australia and the United Kingdom, as in the accompanying corporation table:—

PUBLIC DEBT IN THE UNITED KINGDOM AND IN THE SIX STATES OF AUSTRALIA

Illustration showing the Scope of the General and Local Government of the Six States of Australia, contrasted with similar function discharged and variously distributed in the United Kingdom under the control of General and Local Government, and among Private Railway Corporations.

PUBLIC DEBT INCLUDING INVESTMENTS IN RAILWAYS.	General Local Private All. All. Sparduring last five years	Covernment Covernment Corporation (000, £'s Per Cent. to Per Head (000, £'s Head (000, £'s need (000, £'s need P. Cent.	1.344.821 1.344.821 50.57 30 16 0	774,164 540,401 2033 12 7	774,164 540,401 1,344 821 2,659,386	$\begin{array}{cccccccccccccccccccccccccccccccccccc$			18,397 18,397 7. 8 4 9 4	6,989 273 113 1	30,093 30,093 11		. 9,036 9,036 3.52 2 3 11	240,149	$\begin{array}{cccccccccccccccccccccccccccccccccccc$		=	SIX STATES OF AUSTRALIA
JBLIC DEBT INCLUD	General Local	(000, £'s (000, £'s omitted).			1 52	20 32 £12 7							_		0,63	S	less Capital invested	ES OF AUSTRALIA
Jd	CONTRACTED OR	INVESTED IN.	UNITED KINGDOM, 1905-6—Railways and Tramways	Other Public Works & Services Undefined (Imperial Debt)	Total United Kingdom	Total per Cent. to Total	Deilmong and Transmit	Telegraphs	Roads, Bridges, etc.	Harbours, Rivers, Lighthouses	water Supply and Sewerage	Other Public Works & Services	Unexpended Balance	lia	Total per Cent. to Total		General and Local Public Debt,	SIX STAT

GROWTH OF POPULATION, AND CAPITAL INVESTMENTS IN RAILWAYS AND OTHER PUBLIC WORKS IN THE SIX AUSTRALIAN STATES AND IN CORRESPONDING CAPITAL INVESTMENT IN THE UNITED KINGDOM IN THE PERIOD 1801-1906-7.

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UNITED KINGDOM.

	Ave age Annual Increase Per Head.				
*sl	Average Annual Increase, Minount	0.23 0.31 0.37 0.44	0.43	0 27	
Period.	Annual Rate, per cent.	0 82 0 91 0 95 1 04	0.95	0 87	
in each	Increase Mils.	11.59 6.25 3.72 2.20	0.43	22.76	
Increase within each Period	Per Cent, to 43.65 Mils.	:::::	:	:	
Incre	No. of yes.	50 20 10 5	-	85	
.0]	Population close of ea Period. N	20 89 31.78 37.73 41.45 43.65	43.65	43.65	
	Period.	23,748 8.36 1821 1871 75,743 3.28 1871-1891 69,984 2.011891-1901-2	67,051 1.65,1905-1906	38,850 6 35,1825-1906 43.65	
	Annual Rate.	8.36 3.28 2.01 1.19	1.65	6 35	
Increase within each Period.	Average Annual Increase. No.			38,850	
ithin ea	7:13. Per cent. to to 1119,481.	0.15 2036 77 10 16.99 5 5.74	1 1.63	99 85	100
se wi	lo.oV			105	
Increa	No.	1,662 359, 70 40.35 1 514,850 20.36 77 695 842 1016.95 236,411 5 5.74	67,051	4,113 423 105 99 85	
	Population at close of each Period.	6,058 1,668,367 3.183,237 3,883.079 4,119,481	4,119,481	4,119,481	
	Period,	1801-1871 1801-1871 1871-1891 1891-1901-2	1905-6-1906-7 4,119,481	2-9061-1081	

CAPITAL INVESTMENTS.

Tead.	s. d. 10 0 † 11 10 † 12 10 † 13 10 † 14 10 † 15 10 † 16 10 † 17 10 † 18 10 † 19 10 † 10 †
Per Head.	Six c.k. states, c.k. d. s. d.
Mil.	29.34 29.34 32.96 38.05
Per cent.	17.49
Mill.	 412.6 380.4 293.4 664.8 86 20 1775.2
Per cent.	* 583 552 6 10 23.48 442.6 17.49 933.0 20 20.18 350.4 1752 6 293.4 1775.2 552 664.8 86.20 1 4 57 86.20 1885.2 45 41.775.2 6 52 1885.2 35 64.84 1332.6 0.57
o Z	100 100 100 100 100 100 100 100 100 100
Mid. No F	* 110.0 55.2 933.0 1220 41885.2 1885.2
Period.	** Inc. 10.0 10.2
Per cent.	25.08 8.54 3.28 2.31 0.72 6.11
sh sh	1,067,000 6,248,844 6,248,343 5,719,345 1,722,727 3,752,000 6,000,252
No. cent	24.67 10 78 0.72 99 98
No.	29 20 10 10 10 10 35
Å	30.093.98c 124.977.893 59,135.227 25,896.727 1,722.727 240,103,827 210,009.847
Å	45 900 30.139.883 155.17,77, 214,255,000 240,149,72 240,149,72 240,149,72
Period.	1842

* Exclusive of Imperial Debt Investments.

† Does not include Local Government Capital Investment.

‡ Includes Local Government Capital Investment.

R. M. JOHNSTON.

Government Statistician, Tasmania

Hobart, May 25th, 1908.

It does not require much knowledge of industrial economy to realise the fact that the wealth of any country is greatly multiplied by the introduction of machinery, which facilitates the fresh creation of products or diminishes the cost of production or transport. All the hopes of economists for the amelioration and improvement of the material condition of a people depend upon such agencies increasing at the initial stage at a greater ratio than population, and even at a later stage, as in the United Kingdom, the investments in extending its railways and other public works of local bodies during the last four years increased from £1,623 to 1,885.2 million pounds, or at the rate of £65.5 million pounds per year, equivalent to 30s. 8d. per head per year. Australia, which is still in the initial stage of development, has, in similar investments, only increased during the same period from 222.87 million pounds to 240.14 million pounds, or at the rate of 4.31 million pounds per year, equivalent to 24s. 8d. per head per year. Taking all these matters into consideration. it is clearly demonstrated that Australia's Capital investments in Railway construction and other Permanent Public Works are, in relation to her initial stage of development of an area nearly as large as Europe, and also in relation to her population, progressing at a much slower rate than the United Kingdom, which long ago had advanced to a high stage in all equipment of this nature

THE IMMEASURABLE INDIRECT BENEFITS OF RAILWAYS.

It is also a very common fallacy to assume, as some do, that the only object which the several State Governments of Australia had in view in opening up the country by means of railways was confined to the direct profit which they might possibly receive into the State revenues from the net receipts of the railways, themselves regarded as private undertakings; that is the only view they can take of the vast wealth-producing influence of railways to a country is restricted to the petty consideration as to how far the extension if Railways benefit the Railway carrier, as such. If the mere receipts from freight cover working expenses and the

interest on borrowed or invested Capital, the Railways, according to this restrictive view, are productive; if the working receipts fail immediately to wholly cover both charges, they are deemed to be unproductive, a loss to the country, and a menace to its financial stability. This reasoning is obviously faulty.

To the Country as a State, or to its Producing Industries or Consumers, the whole of the freight charges of a Railway, regarded as an item of State revenue—even though covering working expenses and interest on Capital—form the merest fleabite as compared with the actual immeasurable indirect value, added to the country's wealth-producing industries.

The principal additions to the wealth of the country due to Railways are derived as follows:—

- (1). By the saving of time and of cost of transit.
- (2). By giving commercial value to vast natural products hitherto lacking value, owing to lack of cheap modes of transit.
- (3). By the impetus given to the creation of fresh wealth in areas formerly barren or unproductive.

To estimate the "Wealth of Exchange" added to any country—especially a State with vast areas of virgin soils—would be a difficult matter. We may know this wealth to be great in itself, and vastly of greater importance than the possible revenues of the Railway in itself as an undertaking, but we have no direct means of ascertaining its value quantitatively. Items (2) and (3) can only be vaguely guessed at. But the wealth and other advantages gained by saving time and labour (1) through the improvement in means of transport can be very closely approximated.

The gain from this hidden cause, although of necessity not seen in the receipts of the Railway regarded as an undertaking, becomes at once apparent when we try to realise the difference in cost of transport as between the Railways now in operation and the more imperfect means in common use on bad roads prior to their introduction.

Prior to the opening up of the States' lands and the Loans expenditure on Roads, Bridges, and Harbours, the expenditure of time and labour in effecting the necessary transport between points of production and centres of population and ports of trade was very great. Even in the limited areas when macadamised roads existed, the cost of transit formed a heavy tax upon either reproducer or consumer, or both, accordingly as the product was intended for foreign or local consumption.

This aspect of the case was carefully investigated in Tasmania by the writer soon after its first Railway (the Launceston and Deloraine Railway) was opened for traffic in February, 1871. It was found that prior to regular daily timed service, and the consequent reduced carriers' freights forced upon the latter by the Railway competition, the average for carriers and coaches throughout the State averaged as follows:—

	Carriers & Coacnes prior to 1870.		Decrease		
	d.	d.	d.	per cent.	
Average Fare per Passenger	•				
per Mile	2.92	1.06	1.86	63.70	
Average Freight per Ton per Mile of goods of all					
Descriptions	10.00	1.82	8.18	81.80	

The true interpretation of this remarkable reduction in cost of transit within a very brief period is simply this: that for every £1 now obtained as gross receipts, there is a hidden value saved to either producers or consumers of the country of at least £2, apart from the actual profits of the Railway as an undertaking.

Let us now make an estimate of what this hidden value of railway speedy and cheaper transits means to the States of Australia from the working of State railways in the year 1906-7.

In this year there were open for traffic 14,232½ miles of railway, whose Capital Construction and Equipment amounted to £140,707,474.

 (1) The Gross Receipts were (2) The Working Expenses were (3) The Net Profit on Working was Less Interest on Loans Capital 	£14,455,451 8,519,110 5,936,341 5,055,063	of Construction. 10.27 6 05 4 22 3.59
Net gain to State Revenue for the year	£881,279*	0.63*

If we now take into consideration the saving in time and cost of transit as a hidden value to the States, which was shown to be not less than £2 for every £1 gross receipts, we arrive at the conclusion that, apart from all other indirect advantages specified elsewhere, its value represents in the year 1906-7 a sum of £28,910,902, equivalent to a present capital value of as much as £826,000,000.

The whole of the States' indebtedness of £240,149,000 seems a small affair alongside of this bona fide, though hidden, State benefit.

A study of these significant figures should give pause to all superficial or interested critics who may venture to discuss the wisdom or otherwise of the policy of the Australian States, which, notwithstanding errors in the practical work of carrying out the functional policy of the State, has resulted in giving room and a productive field of work to a population of 2.55 fold the number of 1870; and, after deducting the share of our co-partners—our creditors if you like (that is, the nominal debt of £240,148,727), we have a balance of the people's income in our favour, whose present capital value exceeds that of 1870 (when there was only a debt of £28,328,000) by a sum of £3,473,000,000, besides a valuable asset in our 14,067 miles of railway, whose effect in saving of cost of transit alone is estimated in the year 1906-7 to be equivalent to a present capital value of £826,000,000 sterling.

And further, let it be noted that, notwithstanding the Interest Burden on Australian State Debts has increased since 1870 by 24s. 8d. per head, such has been the increase in the direct working profits of the State

^{*}Note.—This item alone represents a present capital value of £25.179,371, or as much as 17.89 per cent. of the total value of Capital invested in construction.

railways alone—viz., 24s. 6d. per head in the year 1906-7, that the total interest burden on all State Debts, amounting to £240,149,727, has only been raised by the insignificant sum of twopence per head of the population.

This means (apart from the immeasurable material benefit of opening up the hitherto waste lands by the cheap and rapid mode of transit) the surplus profit to the State Treasuries from railway profits alone now practically has wiped off the taxpayers' interest burden on the whole of the existing unredeemed Public Debt of £240,000,000.

The question now to ask of all panic-struck pessimists, or "foes of our own household," is, Would the present population, with its relatively high standard of living and its vastly increased wealth, have existed had the "retrenchment and ruin" scare of the year 1870 succeeded in forcing upon the Colonies at that time the retrograde cry of 'No borrowing" and "Retrenchment"?

Those who answer this question in the affirmative are, indeed, dangerous advisers on financial and economic matters affecting the State.