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MADRAS RECORD OFFICE.

Government of Madras.

Public works **DEPARTMENT.**

G.O. No. 1516

319-320

Press
Mis.

Dated

20-6-

1872.

Not to be folded or roughly handled

*Proceedings of the Madras Government, Public Works Department,
20th June 1872.*

No. 319. Read the following Proceedings of the Government of India in the Public Works Department, (Establishment—General,) dated Fort William, 7th May 1872, No. 612-632 E—G:—

Review of Public Works Establishment charges in India for the last nine years.

Read the following—

Memorandum by the Accountant-General, Public Works Department, dated 7th March 1872.

THE "Establishment" element of the Public Works expenditure is one which has always been a source of dispute. The Executive Branch of the department have as a rule, declared almost ceaselessly, that establishments were scrimped or starved; and the Financial Department, and perhaps, it may be said, the public in general, have been inclined to pronounce it extravagant. The late Governor-General repeatedly alluded to it as excessive and enormous.

2. It is somewhat of a misfortune that there were no other establishments with which ours could be compared. All my endeavours to find out what the Railway Establishments are, and the outlay they supervised, have been invariably met at the threshold with the statement of a total absence of any data whatever.

3. And the only means that seemed to me to be left for reviewing and controlling our establishment beyond the abstract statements of the Executive Branch as to their requirements, was an analysis of our establishments for the past few years. Consequently, I obtained from the several Local Controllers, except Madras, complete statements, in certain prescribed details, of the whole of the establishments of their Provinces for the nine years from 1862-63 to 1870-71. These statements agree with the closed accounts, and may, therefore, be relied on as quite correct, and as the period involved begins with 1862-63, when the establishments were so heavy as to lead to the universal reductions commenced in the next year, and includes every financial phase of the relations of establishment to works, from the exuberant outlay on works in 1863-69 to the minimum outlay on the next year with but slightly altered establishments, it may, in my opinion, be considered that the data before us form a good basis for arriving at good general or average conclusions.

4. These several establishments for each Province for each year have been divided off into parts, so that all exceptional establishments that have no relevance to the real outlay of the department on work being clearly separated (such as purely Survey Establishment, Civil Engineering Colleges, and the like), the remaining columns show distinctly the actual establishment employed on the normal work of the department.

5. These separate statements have been collated in this office into abstracts for each year, and the several per-centages have been struck, which the cost of various sorts of establishments bears to the whole outlay; and from them again I have made the brief analysis which accompanies, of the cost of each section of our establishment.

6. I beg to lay the whole case before Government for such record and use as it may think fit, with the following remarks, showing my own conclusions on the various points involved—

7. The first point is the number of divisions into which a Province or large work should be divided. British Burmah has had an average of only Rupees 13,000 of

expenditure per mensem per division; but this has been clearly wrong, and it now has Rupees 18,000. Mysore has had Rupees 17,000 on an average, but nowhere else has the average been under Rupees 20,000, and I would assume this, or say $2\frac{1}{2}$ lakhs per annum, to be the minimum division in determining the number of divisions into which a Province or work should be divided. Thus, if a Province has a grant of 10 lakhs per annum, it may be divided into four divisions; but if it has a grant of only 9 lakhs, then it should be divided into only three divisions.

8. The second point is the provision for the Budget head "Establishment." The proportion of this in 1862-63, when it was supposed to be so extravagant as to need cutting down, was 20.16. In 1870-71 it had again risen and largely exceeded even that proportion, namely, 23.29 on an average of all the Provinces. In the year of the heavy outlay, 1868-69, the proportion was under $14\frac{1}{2}$ per cent., which may be reasonably admitted to be too low, but the average on the whole nine years has been about $16\frac{1}{2}$ per cent., and this, or say 17 per cent., is, in my opinion, the limit which such grant (exclusive of all abnormal establishments, such as for surveys, etc.,) should be allowed to reach. This proportion of 17 per cent., and another of 2 per cent., for Tools and Plant, would leave 81 per cent. of the whole grant as that available for works, or, if 1 per cent., be taken out for abnormal or exceptional wants, such as Surveys, Civil Engineering Colleges, etc. we would have the whole grant thus divided—

	80 per cent. for Work.
17	for Establishment head.
2	for Tools and Plant.
1	for exceptional items.
Total...	100

9. The third point is the aggregate of salaries or cost of fixed scale of Establishment. The difference between this and the last would consist of travelling allowances, contingencies, and temporary establishments.

In 1862-63, the supposed extravagant year, the salaries were under $17\frac{1}{2}$ per cent. of the whole outlay. In 1870-71 they amounted to close on 20 per cent. In the cheap year 1868-69 they were under $12\frac{1}{4}$ per cent. On an average of the nine years, they have amounted to 14 per cent.

If we place $14\frac{1}{2}$ per cent., as the maximum limit, it will leave $(17-14\frac{1}{2})=2\frac{1}{2}$ per cent., the actual past average, available for the travelling allowances, etc., above referred to; and I would, therefore, fix this proportion of $14\frac{1}{2}$ per cent. on total outlay as the limit for salaries.

The sub-division of these salaries under the different heads of Direction, Construction, and Accounts has now to be dealt with, and I would remark that it would be expedient to admit such maximum limits for each, that the aggregate might exceed the total of $14\frac{1}{2}$ per cent., it being understood that the totals sanctioned should not exceed that $14\frac{1}{2}$ per cent. This, perhaps, will be clearer as I go further on.

10. The fourth point, then, is the cost of Direction, i.e., of Chief and Superintending Engineers. These cannot well be separated. There are some Provinces where there is complete work for both classes of Officers in the strictest sense of the duties of each class. In others, a Chief Engineer is given a Superintending Engineer's work to do in addition to his own; and in others a Super-

intending Engineer is vested with the functions of a Chief Engineer. Hence I take the two classes together and incorporate their cost under the proper head Direction. In 1862 this amounted to 3.83 per cent. But of this a very large proportion is due to Mysore; without that, it would have been little above 3 per cent. In 1870-71 it was nearly 4 per cent. In 1868-69 it was only slightly over 2 per cent., and on an average it has been 2.6 per cent. I would fix 3 per cent. as the maximum limit.

11. The fifth point is the cost of "Construction Establishment," i.e., of Executives, Assistants and Subordinates, with their Office and Petty establishments. In 1862-63 this was a little over $11\frac{1}{2}$ per cent. In 1870-71 it amounted to $14\frac{1}{4}$ per cent. In 1868-69 it was only 9 per cent. The average has been under $10\frac{1}{4}$ per cent. I do not think that more than $10\frac{1}{2}$ should be allowed as a rule; only in exceptional cases 11 per cent. might be permitted. It should be remembered that $10\frac{1}{2}$ per cent. on the whole outlay is 13 per cent. on the amount for works (which is only 80 per cent. of the outlay).

12. The sixth point is the cost of the Controller's establishments. These were only in their infancy in 1862-63. In the year 1868-69, they cost only about 1 per cent. In 1870-71, they cost $1\frac{3}{4}$ per cent. The average of the Provinces under the Government of India, who have had Controllers for the whole period is about $1\frac{1}{2}$ per cent. The work of this section of the establishment has increased enormously of late. Still, I would not put the average cost of the Controller and his establishment at more than $1\frac{1}{2}$ per cent., and the maximum limit should be 2 per cent., that is the cost for all India should not exceed $1\frac{1}{2}$ per cent.; though that for a Province may nearly reach 2 per cent.

13. The summary of these six points is as follows:—

Maximum cost of direction	3	per cent.
Construction	11	"
Control	2	"
Total of the three	16	"
But this total is to be kept down to	14	"
Travelling allowances, etc.	2	"
Total for ordinary establishment	17	"
Add for abnormal	1	"
Tools and Plant	2	"
Work and Repairs	80	"
Total	100	

The minimum average annual outlay of a division to be Rs. $2\frac{1}{2}$ lakhs.

14. I may add that the average cost of Divisional Accountants should be under $\frac{1}{2}$ per cent. And that the total cost of the Control Establishment and Divisional Accountants would be about 2 per cent. For these items the Accountant-General, Public Works Department, should be responsible, except to such extent as excess may be due to an abnormal number of divisions, which necessarily form the basis of his arrangements. I make this remark with reference to the endeavours of the Mysore Authorities to make much of the cost of their Accounts Establishments. Two per cent. of their grant should be available for these wants. If that is not exceeded, they will not be taxed with extravagance on that score. If it is exceeded,

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the Accountant-General should be held responsible for the extravagance if he does not reduce it.

No. I.

Average monthly expenditure per Division in 1,000 of Rupees.

	1862-63.	1868-69.	1870-71.	Average of years.
Bombay	15	30	22	22
Bengal... ..	15	28	16	20
North Western Provinces	21	33	22	24
Punjab... ..	16	30	17	22
Central Provinces	17	27	20	21
British Burmah	15	15	18	13
Oudh	18	26	21	20
Mysore	23	17	15	17
Hyderabad, Imperial... ..	...	31	29	29
Assigned... ..	20	29	20	23
Rajpootana	...	33	21	21
Central India	...	54	11	28
Coorg	...	...	...	...
Total... ..	...	...	...	...
Average... ..	...	...	...	...

Now of these Provinces, the only two that had on an average a less monthly expenditure per Division than Rupees 20,000 were Burmah and Mysore. The former clearly was abnormal, and it now has Rupees 18,000 per Division, and Mysore has been notably high.

I would therefore be inclined to assume that partition of a Province or charge, not Executive Division, should be such as to have an average of not less than Rupees 20,000 per month.

No. II.

Percentage of charge under the head Establishment to the whole outlay.

	1862-63.	1868-69.	1870-71.	Average of years.
Bombay	18.84	15.10	21.51	14.05
Bengal... ..	20.81	18.07	27.38	18.73
North Western Provinces	22.34	11.82	22.81	16.77
Punjab... ..	24.63	13.72	22.07	16.75
Central Provinces	17.58	13.75	25.25	18.68
British Burmah	18.06	15.05	18.99	16.43
Oudh... ..	14.65	13.96	26.45	16.40
Mysore... ..	19.87	23.94	29.73	21.72
Hyderabad, Imperial... ..	...	9.88	14.64	11.07
Assigned... ..	19.99	20.07	20.47	15.73
Rajpootana	...	10.72	20.77	15.61
Central India	...	10.16	20.82	13.90
Coorg	...	23.06	25.79	23.61
Total... ..	20.16	14.48	23.29	16.57
Average... ..	...	...	...	...

Excluding Hyderabad, which has been divided hypothetically, the whole percentage of establishment to outlay has ranged from 10.16 of Central India in 1868-69, to 29.73 for Mysore in 1870-71. The averages of years are given in the lowest line. The whole resulting average is 16.57, and as this is the result of nine years—some very cheap, and some extravagant—I

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should consider that 17 per cent. of the whole grant, or 20 per cent. of the grant, exclusive of establishment, should be the maximum average for the Department, exclusive of surveys and such expenditure.

No. III.

Percentage of charge for all salaries to the whole outlay.

	1862-63.	1868-69.	1870-71.	Average of years.
Bombay	16.00	12.50	18.37	12.06
Bengal... ..	17.28	15.34	23.69	15.73
North Western Provinces	20.01	10.03	19.75	14.55
Punjab... ..	21.14	11.58	19.34	14.36
Central Provinces	15.42	11.87	21.26	16.08
British Burmah	15.76	12.21	16.35	13.82
Oudh	13.62	12.30	22.26	14.48
Mysore... ..	16.87	20.19	24.86	18.27
Hyderabad, Imperial... ..	...	8.90	12.75	9.80
Assigned... ..	17.97	15.84	16.26	12.98
Rajpootana	...	9.03	16.68	13.02
Central India	...	8.54	17.92	11.80
Coorg	...	16.47	18.50	17.67
Total... ..	17.36	12.21	19.94	14.04
Average... ..	...	...	...	...

Similarly, I would accept 14.04 as the fair proportion for salaries, and object to salaries beyond 14½ per cent. of grant, or beyond 17½ per cent. of work to be done, two and a half per cent. being available for travelling allowances and contingencies.

No. III A.

Percentages of charges for Chief Engineers and their Establishments.

	1862-63.	1868-69.	1870-71.	Average of years.
Bombay	1.06	.98	*1.75	.83
Bengal... ..	1.39	1.37	2.16	1.37
North Western Provinces	2.93	1.16	2.40	1.90
Punjab... ..	1.75	1.26	2.37	1.54
Central Provinces	1.96	.84	2.32	1.57
British Burmah	2.57	2.27	3.34	2.41
Oudh	2.02	2.58	5.48	2.84
Mysore... ..	4.29	3.07	4.00	2.85
Hyderabad, Imperial... ..	...	...	...	...
Assigned... ..	...	...	...	30
Rajpootana	...	76	1.86	.89
Central India	...	...	...	...
Coorg	...	...	...	...
Total... ..	1.83	1.20	2.22	1.33
Average... ..	...	...	...	...

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No. III B.

Percentages of charges for Superintending Engineers and their Establishment.

	1862-63.	1868-69.	1870-71.	Average of years.
Bombay	1.36	.77	1.33	.83
Bengal... ..	2.43	1.70	2.76	1.92
North Western Provinces	1.66	.60	1.88	1.29
Punjab... ..	2.44	1.04	1.99	1.32
Central Provinces	.96	1.50	2.16	1.52
British Burmah	...	.89	...	.39
Oudh	...	...	...	...
Mysore... ..	8.25	...	...	.80
Hyderabad, Imperial... ..	...	1.52	2.25	2.03
Assigned... ..	4.07	3.35	2.72	2.34
Rajpootana	...	1.78	2.86	1.92
Central India	...	.45	1.05	.73
Coorg	...	...	...	...
Total... Average...	2.00	.99	1.70	1.22

No. IV.

Percentages of Chief and Superintending Engineers and their Establishment.

	1862-63.	1868-69.	1870-71.	Average of years.
Bombay... ..	2.42	1.75	3.08	1.66
Bengal... ..	3.82	3.07	4.92	3.29
North Western Provinces	4.59	1.76	4.28	3.19
Punjab... ..	4.19	2.30	4.36	2.86
Central Provinces	2.92	2.34	4.48	3.09
British Burmah	2.57	3.16	3.34	2.80
Oudh	2.02	2.59	5.48	2.84
Mysore... ..	12.54	3.07	4.00	3.65
Hyderabad, Imperial... ..	1	1.52	2.25	2.03
Assigned... ..	4.07	3.35	2.72	2.64
Rajpootana	...	1.78	2.86	1.92
Central India	...	1.21	2.91	1.62
Coorg	...	...	...	...
Total... Average...	3.83	2.19	3.92	2.60

Looking at this and the two preceding Tables, I should consider that the cost of Chief and Superintending Engineers should be laid down at from 2½ to 3 per cent. of the whole outlay. When there is large provision, the amount is about evenly divisible between Chief and Superintending Engineers.

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No. V.

Percentages of Construction Establishment.

	1862-63.	1868-69.	1870-71.	Average of years.
Bombay	13.02	9.84	13.61	9.64
Bengal... ..	10.90	11.23	17.09	11.08
North Western Provinces	12.15	7.27	14.00	9.64
Punjab	14.83	8.17	12.78	9.99
Central Provinces	10.82	8.79	15.12	11.75
British Burmah	10.35	7.73	10.96	9.45
Oudh	10.03	8.42	14.22	9.94
Mysore... ..	4.33	15.48	18.45	13.23
Hyderabad, Imperial... ..	...	6.35	9.43	6.54
Assigned... ..	10.96	10.93	12.44	8.72
Rajpootana	...	6.73	11.59	10.16
Central India	...	6.87	13.72	9.52
Coorg	...	16.47	18.50	17.67
Total... Average...	11.66	9.06	14.26	10.21

Again I would accept this average and regulate construction establishment by a proportion of 12½ per cent. to cost of works, on an average, fluctuating to, say, 15 per cent. when work is slight and scattered, to 8 or 9 per cent. when it is in a ring-fence.

No. V A.

Percentage of cost of Construction Establishment exclusive of Accountants.

	1862-63.	1868-69.	1870-71.	Average of years.
Bombay	12.56	9.32	12.99	9.18
Bengal... ..	10.90	10.84	16.29	10.78
North Western Provinces	12.15	7.01	13.45	9.40
Punjab... ..	14.83	7.63	11.97	9.63
Central Provinces	10.82	8.46	14.60	11.43
British Burmah	10.35	6.95	9.82	8.98
Oudh	10.03	8.04	13.57	9.79
Mysore... ..	4.33	14.94	17.80	12.86
Hyderabad, Imperial... ..	...	5.98	8.86	6.18
Assigned... ..	10.96	10.17	11.86	8.40
Rajpootana	...	6.52	10.98	9.80
Central India	...	6.56	13.04	9.07
Coorg	...	15.85	17.40	17.04
Total... Average...	11.55	8.64	13.52	9.86

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No. VI.

Percentage of Controller's Establishment.

	1862-63.	1868-69.	1870-71.	Average of years.
Bombay	56	91	1.67	.76
Bengal... ..	2.56	1.04	1.68	1.36
North Western Provinces	3.27	1.00	1.45	1.72
Punjab... ..	2.12	1.10	2.18	1.51
Central Provinces	1.68	.74	1.66	1.24
British Burmah	2.84	1.32	2.05	1.57
Oudh	1.57	1.30	2.55	1.70
Mysore... ..	...	1.64	2.48	1.39
Hyderabad, Imperial... ..	...	1.03	1.05	1.23
„ Assigned... ..	2.94	1.56	1.09	1.62
Rajpootana	...	.52	2.22	.94
Central India	...	.46	1.27	.66
Coorg	...	...	...	...
Total... ..	...	...	...	...
Average... ..	1.87	.96	1.76	1.23

I think it is clear from this, taking the Provinces that have throughout worked on the India system, that the Controller and his establishment should be set down at from $1\frac{1}{2}$ to $1\frac{3}{4}$ per cent. of the whole outlay on past averages, but that the extra work which they now have to do brings that average up to nearly 2 per cent.

No. VIA.

Percentage of cost of Divisional Accountants.

	1862-63.	1868-69.	1870-71.	Average of years.
Bombay	46	52	61	46
Bengal... ..	...	39	80	30
North Western Provinces	...	26	55	24
Punjab... ..	...	49	81	36
Central Provinces	...	32	52	32
British Burmah	...	78	114	47
Oudh	...	38	65	15
Mysore... ..	...	54	65	37
Hyderabad, Imperial... ..	...	37	55	36
Assigned... ..	...	76	57	32
Rajpootana	...	21	62	36
Central India	...	31	68	45
Coorg	...	62	109	63
Total... ..	...	...	...	...
Average... ..	46	42	74	35

It seems from this that the cost of Divisional Accountants should not exceed $\frac{1}{2}$ per cent.

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20th June 1872.*

No. VI B. }

Percentage of cost of Controller and his Establishment and Divisional Accountants.

	1862-63.	1868-69.	1870-71.	Average of years.
Bombay	1.02	1.43	2.28	1.22
Bengal... ..	2.56	1.43	2.48	1.66
North Western Provinces	3.27	1.27	2.01	1.96
Punjab... ..	2.12	1.59	2.99	1.87
Central Provinces	1.68	1.06	2.18	1.56
British Burmah	2.84	2.10	3.20	2.04
Oudh	1.57	1.68	3.20	1.85
Mysore... ..	...	2.18	3.06	1.76
Hyderabad, Imperial... ..	...	1.40	1.60	1.59
Hyderabad, Assigned... ..	4.07	2.32	1.67	1.94
Rajpootana	...	.73	2.86	1.30
Central India	...	.77	1.95	1.11
Coorg	...	.62	1.09	.63
Total...	...	...	...	...
Average...	1.98	1.38	2.50	1.58

Taking the six Provinces I have bracketed, the whole cost of account-keeping has been really on an average between $1\frac{1}{2}$ and 2 per cent., but the greater work now required in the shape of accounts makes it amount to $2\frac{1}{2}$ per cent. *

RESOLUTION.—The Governor-General in Council in this department considers that this Memorandum may usefully be circulated for information as a review of Establishment charges from a purely financial point of view.

2. It is, however, necessary to note that, although such a review is useful, and on a large average is a fair preliminary guide, it will, in individual cases, require considerable modification from causes which cannot be expressed in averages, and can only be judged of on practical and professional considerations.

3. It should also be noted that, when the outlay is large so as to admit of large grants to works concentrated and easily supervised, the proper proportion of the Establishment charges is naturally lower than in other cases when the works are small and scattered.

4. Again, in applying averages of some years back to the present time, it has to be borne in mind that the scale of Engineers' salaries has been revised, and Military pay proper, formerly borne by the Military Department, now falls on the Public Works Department; also that when the grants (as now in the case of Military and Ordinary works) are restricted, the proportion of Establishment necessarily comes higher. Still, notwithstanding all the allowances that must be made, it is useful to have a preliminary standard of comparison such as is afforded in the Accountant-General's Note.

Proceedings of the Madras Government. Public Works Department.

20th June 1872.

ORDER.—Ordered that this Resolution be forwarded to the Local Governments and Adminis-

To Governments of Madras, Bombay, in the Public Works, Railway and Irrigation Branches of the Public Works Department; Bengal, North-Western Provinces and Punjab in the Public Works and Irrigation Branches; Chief Commissioners of the Central Provinces, Oudh, British Burmah, Mysore and Coorg; Resident at Hyderabad; Agents to Governor-General for Central India and Rajpootana; Superintendent of Port Blair.

trations noted in the margin for information.

Also to the Financial Department for information.

(Signed) J. J. SCOTT,
for Under Secy. to the Government of India.

No. 320.

ORDER THEREON, 20th June 1872, No. 1,516.

ESTABLISHMENT, No. 21.

ORDERED to be recorded.

(True Extract.)

(Signed) G. W. WALKER, Colonel, R.E.,
Secretary to Government



PUBLIC WORKS DEPARTMENT.

ESTABLISHMENT.
General.

N:2475.

To

Nos. 612—632 E—G.

Dated May 7, 1872.

Received — 16

301

Ordered to be recorded

Wm

N:1516

Review of Public Works Establishment
charges in India for the last nine years.

P. W. D. Press—8-5-72—101.

A.C. 1st June 1872 R. 1st June 72
Wm

N:1516. 12th Dec 72

Ck. 2473

Govt. of Madras.
PUBLIC WORKS.

To

Dated

Recd.

Encl.

G. O. 20th June 1922. No. 1516.

Nos. 319 & 320

Re-establishment charges.

15/10/22 with an order

10/10/22