

As to the basis of the various estimates then, the following were the principal items considered, no one being considered alone, but more or less weight being given to each according to the special conditions of the case:—

Probable Population in Boroughs Ten Years hence.—(1.) Probable increase by births. (2.) Probable increase due to assisted immigration. (3.) Probable increase due to the establishment of extended railway connection. (4.) Relative population of boroughs generally in respect to population of surrounding country districts, the relation for the whole colony being about as 1 to $2\frac{1}{2}$. (5.) Increase under existing conditions between censuses of 1874 and 1881.

Probable Population in Country Districts Ten Years hence, or Seven Years after Construction of proposed Extension of Railways.—(1.) Increase by births. (2.) Increase due to assisted immigration. (3.) Increase between censuses of 1874 and 1881 in similar localities containing similar areas of agricultural lands, following on the establishment of railway communication.

Probable Revenue of Railways: Existing Portions of Lines.—(1.) Increase under existing conditions since 1877, and the extent to which same is due respectively to gradual growth and to other causes not so likely to be recurrent.

Probable Revenue of Railways in conjunction with proposed Extension.—(1.) Probable revenue of existing portions of lines ten years hence, if remaining under existing conditions, viz., without extensions. (2.) Probable effect of proposed extensions on this revenue. (3.) Revenue of similar existing railways, under what are estimated to be similar conditions of age and populations to be served, and commanding similar areas of agricultural lands.

Probable Working Expenses of Railways: Existing Portions of Lines.—(1.) Relation of increase of working expenses to increase of revenue since 1877. (2.) Relation of working expenses to revenue on other similar lines under conditions estimated to be more or less similar as regards the population to be served, and commanding similar areas of agricultural lands.

Probable Working Expenses of Railways in connection with proposed Extensions.—(1.) Probable working expenses of existing portions of lines ten years hence, if not extended further. (2.) Probable effect of proposed extensions on these working expenses. (3.) Relation of working expenses to revenue on existing railways having similar grades and similar character of traffic. (4.) Minimum to which it is found to be expedient or practicable to reduce the working expenses on lines of similar length and grades, where the traffic is insufficient to pay the cost of working.

Construction of Railways.—(1.) In most cases there were trial surveys which determined the distances, but in some few cases they had to be scaled from the survey maps. In these latter instances the maps used for scaling from were never of less scale than one mile to the inch. (2.) In some few cases there are detailed estimates, and where such exist they have of course been adopted. (3.) Where there were no such estimates the proposed lines have been estimated in short sections, by comparison with portions of existing lines passing through country of similar character.

Character of Lands traversed, Agricultural, Pastoral, Forest, or Barren.—Some of the information given under these headings has been obtained from actual records, but the majority of it in the outlying districts, concerning which no such records exist, is merely from estimation, based on a personal knowledge of the country, in connection with distances scaled from maps. As regards these items also, and similarly as regards the items of Crown lands and purchased lands, it should be mentioned that it has been generally assumed that the area of lands which would probably be affected by a railway would lie within a distance of ten miles on each side of the line. Where along any given ten miles of railway therefore the lands to the extent of ten miles on each side (or on one side when the other side was along the sea) were either agricultural or pastoral, or Crown or purchased, then the railway has generally been considered and stated as passing through lands of either of those characters accordingly for that ten miles; but where, for example, the width purchased throughout any given ten miles of railway only reached to the extent of one mile on each side (or on one side where the other side was along the sea), then a length of one mile only out of the ten miles would be stated as passing through purchased land, the remaining nine miles being held to be through Crown lands. To adhere to this rule rigidly has not always been practicable in consequence of the absence of accurate information, but it may nevertheless be regarded as the basis generally adopted and adhered to so far as was practicable.

Character of Lands traversed, Crown and Purchased.—Under these headings the information given is almost entirely taken from survey maps and records of the latest date procurable.

Coming now from abstract principles to particular cases, it may be desirable to state a few of the most readily intelligible of the facts from which the estimates of probable populations and railway revenues, &c., ten years hence were deduced, without however attempting to detail the processes employed in arriving at the deductions themselves, which cover about 150 pages of foolscap, and with which I do not propose to burden the Commissioners, as they have been already checked.

First, as regards probable populations. These of course, in other than mining districts, will mainly depend on the areas of agricultural lands traversed by railways, and the richness or otherwise of these lands. In boroughs the populations seem to average about 1 to every $2\frac{1}{2}$ of the population in surrounding districts; and in agricultural country already opened up by railways for seven years or so, the populations generally vary between 1 to every 30 and 1 to every 60 acres of agricultural land lying within ten miles on each side of the railway-line, depending on the character of the lands and the proportion of women and children to adult males.

As regards the increase between the years 1875 and 1881 in the populations of some of the boroughs which will be affected by the railways now in contemplation, and also as regards the increase in the populations of some country districts following on the construction of railways, some further facts are stated below, together with some data as to the probable revenue and working expenses of existing lines.