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NATIONAL TRANSPORT PROBLEMS.

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Modern transport facilities are an essential portion of modern economic life. Without them, there could not be any of the regional specialisation of production which adds so much to the volume and variety of the goods we can each procure for our consumption.

The only methods of transport with which we need concern ourselves are transport of goods by canal, transport of goods and passengers by road, and transport of goods and passengers by rail. Internal water-way transport in Ireland is of greater importance than is generally realised (see Table I.), but the dynamic elements in the problem are represented by road transport and railway transport.

Unfortunately, no statistics exist of the transport of goods by road. Road transport is partly supplemental to, and partly competitive with, railway and canal transport; but that the relative importance of goods transport by road is increasing is evident from the figures contained in Table II.

Yet the Railways remain and must remain of paramount importance as carriers of goods, especially heavy goods. An idea of their importance is obtainable from Table III., showing the number of ton-miles worked in various years.

For the transport of heavy goods, especially the raw materials of Agriculture and Industry, over long distances, the railways are absolutely indispensable. With the cheap transport of such goods the industrial and agricultural development of the country is closely bound up; yet if the railways should lose the cream of their business to other transport agencies,

they would have to maintain or increase their rates of charge for these heavy goods. An idea of the importance of railway transport to the farming industry, for example, may be obtained from the figures shown in Table IV.

As carriers of passengers, it is desirable to estimate the relative importance of railway and bus services. Already these services cover, or covered in September, 1928, 4,388 miles of roadways. The mileage of railways in the Free State is 2,705. The G.S.R. in 1928 carried 10½ million passengers, exclusive of season-ticket holders. With this figure may be compared the 2,170,000 passengers carried by buses between Dublin and other points in the country. In making this comparison it must be remembered that very few suburban travellers are included in the 2,170,000 passengers carried by buses between Dublin and other points, while there is a considerable number of suburban railway passengers, especially in summer time, who are not season-ticket holders. Apart from suburban bus services, but including cross-border services, the number of vehicle-miles run by buses in 1928 was 10 millions; we may compare with this the fact that the number of passenger-train miles run by the G.S.R. and other railways, wholly or partly in the Free State, was 9,150,000 in the same year. On the face of it, it would seem as if the railways were at least five times as important as passenger-carriers over long distances; as the average train would hold as many people as ten buses, it would seem that they provided the possibility of carrying about ten times as many passengers as the buses carried in 1928.

There is evidence that bus development has practically reached its maximum. The number of omnibuses and char-a-bancs diminished from 718 in 1928 to 705 in 1929 (Table II.). Further, with one exception, the receipts per vehicle-mile, in the case of bus services, show a diminution in 1929, and it is doubtful whether the average receipt per vehicle-mile now shown is financially profitable to the owners of buses (Table VI.). It would be very informative if receipts per vehicle-mile could be published, not as an average, but as an arrayed series, referring to typical classifications of bus concerns, and still more so if costs of operation per vehicle-mile could be ascertained and published with reference to a similar classification.

All this goes to show that the railways are, and must remain, the back-bone of our national transport organisation. Recent developments have served mainly to skim the cream off railway profits, and have probably increased, rather than diminished the cost of transport in the long run, though,

doubtless, they have created a super-abundance of new transport facilities.

The total capital invested in Irish railways is £47,000,000, of which £28,500,000 are invested in the G.S.R. This represents for the most part expense incurred, and labour accomplished some generations ago, the results of which form a permanent part of the economic equipment of the nation. Whether the investors would have incurred this vast expenditure if they had foreseen the fate of their successors in the post-war period is one question, but the question for the public is whether it is good national economics to scrap any important portion of capital equipment provided at such considerable expense in the past.

The economic position of the Railways as carriers in Ireland is governed by a strict legal control, affecting the structure of the railways themselves, the arrangements to secure the safety of passengers, the rates charged for goods and passengers and the classification of the goods to be carried. In this respect, their rivals enjoy a comparative freedom from State supervision. Further, geographical and population conditions in Ireland make the economic position of railways somewhat difficult. The average passenger journey by train is only about 27 miles. The average passenger journey by long distance bus is about 18 miles. All the large population centres are at or near the coast, with the result that a large proportion of the transport arising in connection with them is marine transport, making no use of internal rail facilities, and lending itself rather to short distance collection and distribution by lorries serving the hinterlands of the various ports. This factor is part of the natural conditions affecting the case, for which no one can be blamed; but there is a third factor for which the State and the Public must accept a certain responsibility. The total cost of transport includes the capital cost of making the road, whether it be a rail-road or a macadamised road, also the cost of maintaining the road in good repair, and the cost of operating the traffic on that road.

The railways have had to make their own roads at their own expense, they have to maintain these roads, and, in addition, incur the cost of moving traffic. On the other hand, both lorries and buses run over roads to the capital cost of producing which they have contributed little or nothing. On the improvement and maintenance of these roads in 1927-28 a sum amounting to £3,000,000 was spent out of public funds, national and local. An increase in annual licence duties, substantial in the case of heavy commercial vehicles, comparatively trifling in the case of buses, took place with effect from January 1, 1927. Lorry taxation has since remained

unchanged, but a very steep increase in bus taxation took place with effect from July 1, 1929. (Tables XII. and XIII.).

Under the "National Road Scheme" half the normal annual revenue from motor taxation is being capitalised, so that in theory we may look forward to a gradual reduction in the total annual expenditure on roads, without any falling off in the condition of our roads, on the assumption that the density of traffic remains substantially unchanged.

It appears that 658 buses, with the addition of hackneys, contributed £111,000 in taxation in 1927, while 6,017 lorries contributed £181,000. Private motorists contributed £298,000 in that year, or 46 per cent. of the total (*i.e.* £647,000). Information about the cost of making roads suitable for the different kinds of traffic is incomplete. Moreover, financial estimates of the damage done by different kinds of vehicles to different kinds of road surfaces are not agreed. Yet it seems to the present writer that buses possibly, and lorries certainly, contribute by way of taxation very much less than their fair share of the cost of making and maintaining the roads they use. If a private railway company constructed and maintained a railway from Dublin to Cashel, and if the State afterwards constructed, at its own expense, another railway, running parallel to it, at a few miles' distance, and made a present of that railway to another private company, the second company could compete very effectively with the first. In fact, the State has done essentially the same thing as regards lorries and buses, and their competition with the railways owes its origin entirely to the fact that they receive a hidden subsidy as an incidental result of the financial policy of the State.

Sir W. M. Acworth, writing in the *Economic Journal* of June, 1922, calculated that a lorry, weighing four tons and carrying five tons of goods over a distance of 112 miles inflicts £10 worth of damage to the roads in a single journey. If this is so, it would require a tax of about £2,000 a year on such a lorry to compensate for the damage it does to the roads, and put its competition on equal terms with railway transport. Clearly a tax of very much smaller dimensions would divert back again to the railway every ounce of heavy long-distance traffic.

The tax on lorries was raised with effect from January, 1927, and Table IIIa. would indicate that that increase had the effect of diminishing the number of lorries exceeding 2 tons in weight in the year 1928. On the other hand, in 1929, the number of lorries between 1 and 2 tons in weight doubled, while the figures for lorries heavier than that remained practically stationary. The figures contained in Table VII. would indi-

cate that the railways began to get back some of the traffic formerly carried by lorries, for in 1927, the average train-load on the G.S.R. increased from 52.78 tons to 54.52 tons; similarly, the average length of haul in 1927 diminished from 58.58 miles to 56.35 miles. But it would appear that this tendency was arrested, for in 1928 the average train load showed a slight diminution, while the average length of haul on the G.S.R. increased very slightly. In other words, even after the increase in taxation, lorry competition with the railways remains intense, and the substantial increase in the total number of vehicles in 1929 would point to the same conclusion.

The only increase in the taxation of lorries that is significant, now that lorry traffic has adjusted itself to the new conditions, is the increase from £21 to £30 in the case of lorries from 1 to 2 tons in weight. The recently published Report of the Great Southern Railway Company would suggest that lorry competition is now more serious than ever. For the first time since 1926 the Total of Goods Train Receipts has shown a diminution in 1929, as compared with the previous year. (Table V.). Receipts from the two heavy classes of Goods Traffic are substantially unchanged, but there is a fall from 1,756,662 to 1,719,989 tons in the case of General Merchandise, and a corresponding fall in receipts.

The figures shown in Tables III., VII. and VIII. would probably illustrate this point still further, if it were possible to add those for 1929. After 1927, and up till recently, it was possible to say that the railways were getting back as goods carriers some portion of their losses as passenger carriers. In any case, it remains true that the relative importance of Goods Traffic in the Total Traffic Receipts progressively increases. (Table IX.). Yet the financial position of the G.S.R. is sound, and has been steadily improving (Table XI.). The "adjusted" net income for 1929 was £882,195. The standard net revenue contemplated by the Railways Act of 1924 is £1,169,900. A very moderate increase in the quantity of goods and passengers carried at the present rates would enable that revenue to be reached, and the ordinary shareholders to receive 5% instead of 1% on their shares. The increase in net revenue that has recently taken place has been possible in spite of the diminution in the total traffic receipts only because the economies resulting from amalgamation made a still greater reduction in traffic expenses. The human side of these economies is illustrated by the fact that on the 16th March, 1929, there were 13,536 adult males employed by the G.S.R. as against 14,942 on 27th March, 1926, a diminution of 1,406. The total number of employees on the bus services,

both national and suburban, in August, 1928, was 1,680. To this figure must be added an uncertain number of those who indirectly obtained employment as a result of bus developments. Whatever the total of this new employment may be, there must be set off against it the falling off in the number of railway employees.

The transport problem that interests the public is how to organise transport facilities so as to further the general economic development of the country. The railways are an essential element in these facilities, and no solution of the problem is possible unless the railways are given a fair field in competition with other methods of transport. We cannot afford to scrap any substantial portion of our railway equipment, but it is probable that certain branch lines should be shut down, and certain stations closed to passenger traffic. This local short-distance traffic should be abandoned to the buses, which should be induced or compelled to run in conjunction with railway services. Bus services should converge on important railway centres, from which quick long-distance services are available to Dublin and elsewhere. Slow passenger train traffic should be abandoned, and long-distance bus services should be discouraged in every possible way.

In general, if the object of transport facilities is to further economic development, there must be some relation between transport development and the economic possibilities of the immediate future. Transport facilities have recently grown out of all proportion to these economic possibilities, and we suffer from a plethora of them. At present, we seem to resemble rather the frog that inflated itself, to try to resemble an ox. Much of the public expense incurred on making possible the duplication of long-distance transport has been as sensible as it would be if a person living in a house sufficiently large, built an additional room in such a way as to make three of the original rooms uninhabitable.

There is certainly the need for co-ordination of national transport policy. A Ministry of Transport, such as exists in Great Britain, is not in itself the solution of the real problem. One method of approach would be to ascertain as nearly as possible, on an annual basis, what it costs to make and maintain the very substantial roads which to lorries and omnibuses are a necessity, while they are a very agreeable luxury to the private motorist, who is, however, saddened by the reflection that he is probably paying more than his share for them. The taxation of lorries and omnibuses could then be raised to the still higher figure that would be necessary in order to put their competition with railways on an equitable economic

basis. This would probably kill most of the existing omnibus and lorry traffic, and restore the long-distance monopoly formerly enjoyed by the railways.

While this might meet the economic facts of the case on the short view, it might be contended that it is in the economic interest of all that short-distance traffic, especially of goods, should receive some sort of indirect subsidy from the State, as an encouragement to economic development. Similarly the social consequences of omnibus development have been mainly beneficial in destroying the monotony of rural life, and bringing the amenities of our large towns within the reach of all. Buses have been pioneers in the creation of new passenger traffic, and it would be a retrograde step to restore the stagnation of country life which they have helped to dissipate.

The Northern Ireland procedure of giving existing road passenger services a virtual monopoly of the routes they serve creates a vested interest in routes and destroys competition. The proposal to impose a vehicle-mile tax on buses was really the best, and should have been persisted in. It was opposed with an embittered unanimity by bus interests, but the more solidly established of bus firms, if they had really understood their own economic interests, should have joined in the opposition "*tamen ut qui vincere nollent.*" By adding to the cost of operation per mile, the vehicle-mile tax would have promoted the speedier death of the weaker concerns, while making a present of their business to their stronger rivals. It is really a tax of the same kind as the licence duty on all retailers advocated by the present writer in a paper read before this Society on a former occasion. There are too many bus concerns competing for a limited amount of traffic. By killing off some of them, the others will be strengthened, become more profitable, and eventually be able to provide a cheaper service and lower fares than would be possible if the number of competing services remains excessive.

The object of this Paper is to direct attention to certain important economic facts affecting our transport system, and provide where possible a statistical measurement of those facts. The treatment is neither comprehensive nor exhaustive, but a certain general conclusion may be stated. We must cut not only the dead wood, but the superfluous growth out of our luxuriant transport system, and prune it down to the measure of our economic requirements. It is for expert knowledge and practical statesmanship to elaborate the details of a satisfactory transport policy.

TABLE I.—PERCENTAGE OF WATERWAY TRAFFIC TO TOTAL RAILWAY (GOODS) AND WATERWAY TRAFFIC IN VARIOUS COUNTRIES IN 1905.

England and Wales	...	...	...	...	...	...	...	8.0%
Germany	...	...	...	...	...	...	...	14.9%
Ireland	...	...	...	...	...	...	...	16.0%
France	...	...	...	...	...	...	...	19.7%
Belgium	...	...	...	...	...	...	...	45.0%

TABLE II.†—RETURN SHOWING THE NUMBER OF (a) PRIVATE MOTOR CARS (and other vehicles taxed as horse-power), (b) COMMERCIAL GOODS VEHICLES (Lorries and Vans), AND (c) OMNIBUSES AND CHARABANCS LICENSED IN AN SAORSTAT IN CERTAIN YEARS

CLASS	YEARS						
	1923	1924	1925	1926	1927	1928	1929
Private Cars and other Vehicles taxed on horse-power	3,578	13,780	16,211	19,848	22,415	26,927	29,435
Commercial Goods Vehicles (Lorries, Vans, etc.)	3,204	4,489	4,050	5,468	6,017	6,496	7,264
Omnibuses and Charabancs	—	—	474	558	658	718	705

TABLE II A †—RETURN SHOWING THE NUMBER OF COMMERCIAL GOODS VEHICLES (classified according to unladen weight) LICENSED IN AN SAORSTAT IN CERTAIN YEARS.

YEAR	Not ex-ceeding 12 cwts	Not ex-ceeding one ton	Not ex-ceeding 2 tons	Not ex-ceeding 3 tons	Not ex-ceeding 4 tons	Not ex-ceeding 5 tons	Not ex-ceeding 6 tons	Ex-ceeding 6 tons	Total
1925	1878*		1936	241	521	136	19	110	4,950
1926		Not subdivided							5,468
1927		do.							6,017
1928 (a) Petrol-Driven	208	4,291	915	247	565	146	42	7	6,421
.. (b) Steam-Driven		Not subdivided							75
1929 (a) Petrol-Driven	180	4,262	1,746	299	533	185	40	11	7,209
.. (b) Steam-Driven		Not subdivided							55

* These 1878 Vehicles were not subdivided.

NOTE.—The foregoing figures have been supplied by the Licensing Authorities. The figures relating to Omnibuses and Charabancs for the years 1925, 1926 and 1927 are regarded as doubtful.

† Supplied by the courtesy of the Department of Local Government.

TABLE III.—TOTAL TON-MILES WORKED.

	G.S.R.	G.N.R.
1925... ..	162,728,159	—
1926... ..	162,077,795	63,376,666
1927... ..	178,771,102	69,274,248
1928... ..	181,128,873	67,202,527

PERCENTAGE OF TOTAL.—G.S.R.:

YEAR	General Merchandise	Live Stock	Coal Coke	Other Minerals
1925	60.91	16.58	18.81	3.70
1926	63.02	17.14	15.08	4.76
1927	59.69	16.32	16.75	7.24
1928	60.26	16.97	15.75	7.02

TABLE IV.—G.S.R.

YEAR	Manures (Tons)	Oil Cakes and Cattle Foods
1925	131,251	87,089
1926	143,818	96,709
1927	130,906	157,524
1928	144,298	147,874

TABLE V.—GREAT SOUTHERN RAILWAY.

YEAR	Goods Train Receipts	Passenger Train Receipts	Total Traffic Receipts
1925	£ 2,273,669	£ 1,992,161	£ 4,265,830
1926	2,245,940	1,940,094	4,186,034
1927	2,426,271	1,806,404	4,232,675
1928	2,460,380	1,643,332	4,103,712
1929	2,403,240	1,555,547	3,958,787

TABLE VI.—AVERAGE RECEIPTS PER VEHICLE-MILE (BUSES).

YEAR	Suburban	Dublin and Other Points	Cork and Other Points	Total
1928	8.11d.	9.43d.	9.30d.	8.74d.
1929 11 months	7.94d.	8.8d.	9.5d.	8.4d.

TABLE VII.—AVERAGE TRAIN LOAD.

YEAR	[L.M.S., 130.37 tons.] G.S.R.	G.N.R.
1923	52.28	—
1925	52.78	64.30
1926	54.52	66.68
1927	53.90	64.19
1928		

TABLE VIII.—AVERAGE LENGTH OF HAUL.

YEAR	[L.M.S., 45.01 miles.] G.S.R.	G.N.R.
1923	57.09	—
1925	58.58	52.59
1926	56.35	50.78
1927	56.71	50.22
1928		

TABLE IX.—PERCENTAGE OF FREIGHT TO TOTAL TRAFFIC RECEIPTS.

YEAR	G.S.R.	G.N.R.
1925	53.30	—
1926	53.65	51.25
1927	57.32	54.62
1928	59.95	54.97
1929	60.70	55.67

TABLE X.—PERCENTAGE OF TOTAL TRAFFIC EXPENDITURE TO TOTAL TRAFFIC RECEIPTS.

YEAR	G S.R.	Rys. p'ly in Saorstat	G.N.R.
1925 ...	91.23	90.44	—
1926 ...	89.32	92.11	83.33
1927 ...	84.53	86.37	83.22
1928 ...	81.76	87.60	85.16
1929 ...	79.69	—	83.24

TABLE XI.—GREAT SOUTHERN RAILWAY. TOTAL NET REVENUE (ADJUSTED FOR COMPARISON WITH "STANDARD NET REVENUE," i.e., £1,169,899 iis. 3d.)

1925...	...	...	...	...	...	...	416,900
1926...	...	...	...	...	...	...	493,633
1927...	...	...	...	...	...	...	715,824
1928...	...	...	...	...	...	...	818,797
1929...	...	...	...	...	...	...	882,195

TABLE XI A.—GREAT NORTHERN RAILWAY.—NET REVENUE.

1925...	...	...	...	...	...	...	—
1926...	...	...	...	...	...	...	271,259
1927...	...	...	...	...	...	...	352,313
1928...	...	...	...	...	...	...	310,691

TABLE XI B.—TOTAL MALE STAFF OF G.S.R. (ADULTS).

27th March, 1926	...	...	...	...	14,942
26th March, 1927	...	...	...	...	14,755
31st March, 1928	...	...	...	...	14,088
16th March, 1929	...	...	...	...	13,536

TABLE XII.—TAXATION OF COMMERCIAL GOODS VEHICLES
BEFORE AND SINCE 1ST JANUARY, 1927.

ANNUAL DUTY.

Weight Unladen	New			Old		
	£	s.	d.	£	s.	d.
Not exceeding 12 cwt. ...	10	0	0	10	0	0
12 cwt. to 20 cwt. ...	16	0	0	16	0	0
1 ton to 2 tons ...	30	0	0	21	0	0
2 " 3 " ...	45	0	0	25	0	0
3 " 4 " ...	60	0	0	28	0	0
4 " 5 " ...	75	0	0	30	0	0
5 " 6 " ...	90	0	0	30	0	0
Exceeding 6 tons ...	105	0	0	30	0	0

TABLE XIII.—TAXATION OF OMNIBUSES BEFORE AND SINCE
1ST JULY, 1929.

ANNUAL DUTY.

	New			Old		
	£	s.	d.	£	s.	d.
Seating more than 6 but not more than 14 persons ...	70	0	0	28	0	0
Seating 14 to 20 persons ...	100	0	0	40	0	0
" 20 " 26 " ...	130	0	0	52	0	0
" 26 " 32 " ...	160	0	0	64	0	0
" more than 32 persons ...	£5 for	each	seat	£2 for	each	seat

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