

The rise and fall of railways in Jamaica, 1845–1975

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Jamaica pioneered rail transport in the British colonies. The first railway was built in 1845 from Kingston to Angels, a distance of fourteen and a half miles. The introduction of rail transport came at a time when sugar, the mainstay of the Jamaican economy, was in difficulty and improved transport was considered to be an important factor in the restoration of the plantation economy on the island. Steam locomotives pulling trains on iron rails epitomised the process of economic development in the nineteenth century. Britain, with capital, technical expertise and a sympathetic government, had pioneered the railways with the opening of the Stockton & Darlington Railway in 1825 and the Liverpool & Manchester Railway in 1830, and by 1850 Britain had over 6,500 miles of railway.¹

There has been much debate on the importance of the railways for economic growth, ranging from Rostow's belief in their crucial role in supplying a faster, cheaper and more dependable transport service to Fogel and Engerman's view that the social savings derived from railways were slight.² It is without doubt, however, that the railway, by its creation of a network permitting the free flow of passengers and freight from one end of a territory to another, could become a source of economic strength to a whole society. It is in light of this general debate that this article examines the relationship between railway transport services and economic growth in Jamaica between 1845 and 1975.

The history of Jamaica's transport sector has attracted very little scholarly research, although transport is important for the socio-economic development of any society and this is certainly true of Jamaica.³ In the heyday of the sugar plantation economy, sugar estates and plantations growing export crops dotted the length and breadth of the island, and Jamaica was considered the richest Caribbean economy in the British Empire.⁴ Although domestic small-scale production was of little importance during the slave era, peasant production and internal marketing controlled by the slaves did develop, and with them the need to transport goods in this internal market. This trend accelerated with emancipation in 1838, giving rise to a vibrant and resilient peasantry.⁵ With these early developments there evolved a fairly well integrated road network consisting of main roads, bridle paths and wain roads, connecting the interior with towns and coastal ports.

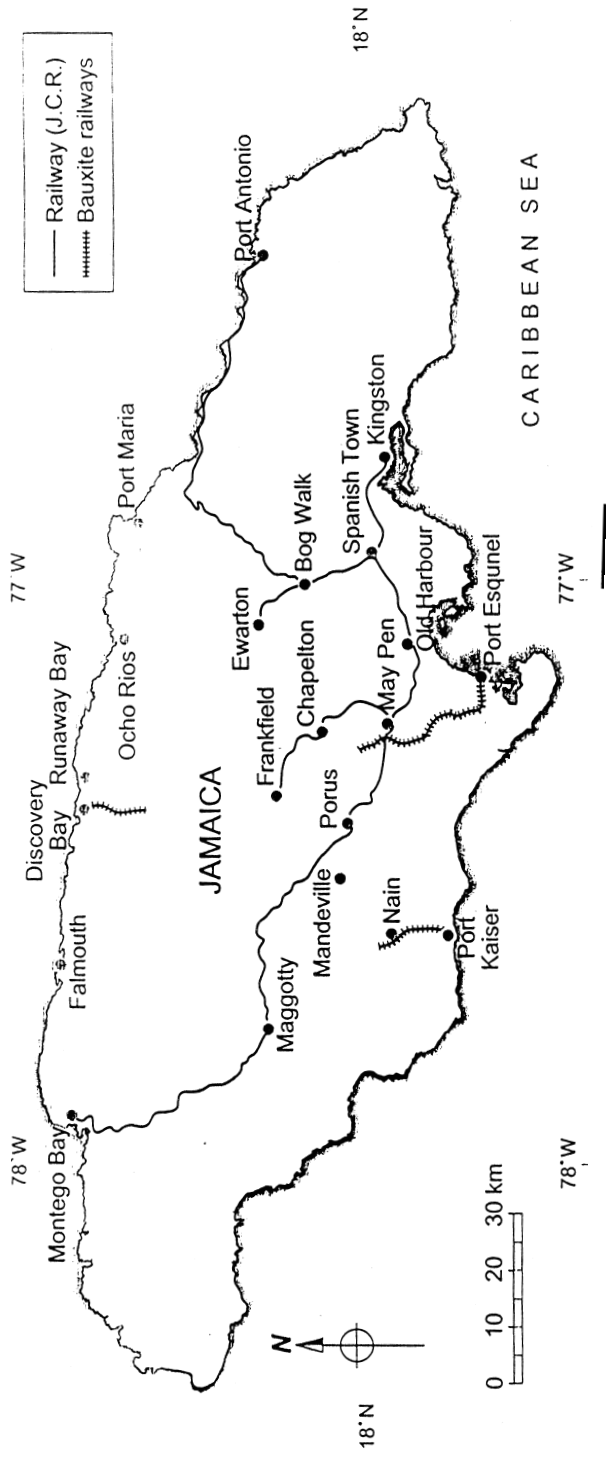


Figure 1 The railway and road network in Jamaica. Source David C. Rollinson, *Railways of the Caribbean* (Macmillan, London, 2001), p. 51

Unfortunately these roads, especially those in the interior, were in an appalling state, making public road transport inefficient and slow. Edward Long remarked in 1784 that ‘Roads for hauling heavy loads of produce to shipping ports were everywhere a primary necessity yet they were almost invariably in a deplorable condition . . . cut up and impassable after rains.’⁶ As late as 1843 Mr J. M. Phillips complained that the roads of Jamaica were a disgrace to a civilised community and militated considerably against its agricultural prosperity. Every year immense sums of money were voted from parochial taxes and general revenue for road repairs but very little was done. Even the lines of communication between the principal towns were little better than river courses which placed the life of every traveller in jeopardy. Bridges to span Jamaica’s many rivers were a necessity but few existed and they were poorly constructed, ‘. . . Only light wooden structures, which were swept away by the first freshet’ (flooding).⁷ The geography and climate of Jamaica adversely affected the layout and maintenance of its roadways. A small island of 147 miles in length, varying in width from twenty-two to fifty miles, Jamaica is mountainous and criss-crossed by rivers and streams. During the rainy season traversing roads and rivers is hazardous, and before major improvements were made to the road system the production process on the plantations had to be completed and produce shipped before this season set in.⁸

Jamaica had little by way of public transport before 1840. Goods and passengers were conveyed by coastal vessels, pack animals or animal-drawn carts, while for the majority of the population walking was the only means of travel.⁹ Under these conditions, and the poor state of roads, the movement of goods and people was slow and inadequate. Thus there was a pressing need for an alternative method of transport, and this found expression in 1845 when the first railway in Jamaica was established.

I

On 22 November 1845, only fifteen years after the first railway was inaugurated in Britain,¹⁰ the Earl of Elgin, Governor of Jamaica, accompanied by passengers filling ten carriages, travelled the twelve miles from Kingston to Spanish Town by train (see Figure 1).¹¹ The train achieved speeds of 30 m.p.h., which may seem quite slow by today’s standards but was enough to get the driver, Isaac Taylor, fined £2 for speeding.¹² Following this trial run, a regular passenger service was operated between the two towns. Six months after the opening of the line, Lord Elgin reported that it had fully realised the expectations of its promoters; after eighteen months of operation, returns were reportedly ‘satisfactory’.¹³

The inauguration of railways in Jamaica came just after the British government had enacted the Sugar Duties Act, aimed at reducing preferential treatment for British colonial produce entering the British market. This legislation, which took effect in 1854, came shortly after the full emancipation of slaves and at a time of poor labour relations between worker and

employer. The sugar planters considered the Act a serious setback to the island's economy. To offset its effect productivity levels had to be increased, either by employing new technology or by seeking a more controllable labour force.¹⁴ The stimulus of a cheaper transport system to production was fully appreciated by the promoters of the Jamaica Railway Company, William Smith, of Manchester, a West India merchant who also owned land in Jamaica, and his brother David, a resident sugar planter of the island. The latter was extremely optimistic of the economic benefits that would accrue from rail transport, and in a letter to William of June 1844 he wrote:

I feel assured you will agree with me in my view of the matter as to the alteration in the duties having any effect on our Railway. I do not fear in the most remote degree. St Thomas in the Vale and Llundas vale in St John's whence we shall get the bulk of our produce are the most seasonable and most thickly populated districts in the Island and the facilities which will be afforded then by the establishment of the Railway will enable them to keep up their cultivation when other less favoured districts may perhaps fail. I this morning had a long conversation with two of the most experienced planters in that quarter and their opinions coincide with my own. They say that if I give them the Railway and carry manure at a low price they can double their crop.¹⁵

The scheme for the railway was forwarded to the Local House of Assembly of Jamaica in 1843. The proposal was for a double track between Kingston and Spanish Town, with branch lines to Angels, Port Henderson and the Caymanas sugar estate. The House unhesitatingly approved the plan and by December of that same year the Jamaica Railway Company was formed. David Smith became the first General Manager of the company, while his brother William was made a director. The prospectus was issued in February of the following year.¹⁶

Support for the scheme was widespread. Planters felt that a railway system into the interior would not only revitalise their plantations, but would also facilitate the establishment of central sugar factory systems.¹⁷ In addition Governor Elgin felt that it would ease the heavy traffic between Kingston and Spanish Town, save labour and reduce transport costs to the planters. Meanwhile supporters of the peasantry felt that it would provide a stimulus to peasant settlement, making it easier for peasants to ship their produce to markets.¹⁸ Thus the primary objective of this early phase of Jamaican railways was to facilitate the agrarian economy, especially the sugar plantations, through the efficient transport of freight. During this early introductory phase, as was the case in Britain and elsewhere, railways were promoted primarily with the view to freight haulage, the conveying of passengers being of secondary importance.

Construction started in September 1844, when the royal assent was granted. The estimated cost of the first phase of the project, a single track to Angels, was £150,000 in 30,000 shares of £5 each. However, when it was completed in 1845 the actual cost was £222,250, or £15,377 per mile, inclusive of buildings and rolling stock. Most of the finance came from the Liverpool merchants

Ewart Hornby & Rathbone and the London bankers Denison Kennard & Haywood.¹⁹ The first two steam locomotives, named the *Projector* and the *Patriot*, built by Sharp Brothers of Manchester, arrived in Jamaica in 1844.²⁰

The initial optimism of the promoters was, however, soon dampened by the continued decline in the plantation economy and the absence of local capital for railway investment.²¹ Consequently, between 1845 and 1869 only eleven miles of railway were added – an extension from Spanish Town to Old Harbour, which cost £60,000, or £5,000 per mile, and opened to traffic on 1 July 1869.²² Although revenue grew steadily from £10,722 to £24,200 in 1875 the expected increase in traffic, which had supported the case for expansion, was not forthcoming. On such a short distance returns were too small to fully cover operational costs. Consequently between 1867 and 1877 the railway deteriorated. Train services were irregular and unsatisfactory, buildings and rolling stock fell into disrepair and tracks became hazardous because of poor maintenance. Moreover the government was unwilling to guarantee the cost of improving or extending the railway.

This situation was to change during the tenure of Sir Anthony Musgrave, who became Governor of Jamaica in 1877. He was convinced that great economic benefit would accrue to the island from soundly managed rail transport, and in just a few months after assuming his duties he entered into negotiations with the Jamaica Railway Company. A proposal for a ‘take-over’ was discussed in the Legislative Council in 1878, and the following year the government purchased the existing twenty-six miles of railway for £93,932. Immediately afterwards, a repair and modernisation programme costing £107,206 was embarked upon.²³ Within the first few years of government control the railway experienced a period of stability and a net profit of £10,235 in 1879/80. In 1880/81, as a consequence of the ‘bad state of trade’ net revenue fell to £4,382, but increased again to £9,960 in 1881/82. By 1885 the net balance was £14,002, the highest since the inception of rail service. This initial success formed the basis of further extensions and gained for the government the approbation of the Royal Finance Commissioners in 1885.²⁴

Coinciding with this apparent improvement in the railway’s fortunes was the rapid expansion of the citrus and banana industries in the central, eastern and north-eastern parishes and a revitalisation of the sugar economy in the south and south central parishes of the island.²⁵ These economic developments strengthened the case for an ‘extension’ of the railway which, its supporters argued, would cost an estimated £1 million but would bring lasting benefits to the whole country. The end result of both private pressure and government interest was a series of extensions beginning in 1880, resulting in the railway being extended westward from Old Harbour to Porus and northwards from Spanish Town to the interior district of Ewarton. By 1885, when these two extensions were completed, there was a total of sixty-four miles of railway in Jamaica.²⁶ The Ewarton and Porus lines brought rail transport closer to the thriving sugar estates in the interior, the most important of which was Worthy Park, and to the centre of the citrus industry. The main objective of this second phase of expansion was, like the first, the opening up

of new and larger areas for citrus cultivation and for sugar estates. During the 1880s further agitation grew for additional extensions to the railway system, namely sixty-two miles westward from Porus to Montego Bay, and fifty-four miles north-eastward from Bog Walk to the town of Port Antonio. These lines were to be laid through the banana, cacao, citrus and coconut districts of St Catherine, St Mary and Portland.²⁷

In early 1885 several influential banana planters of St Mary sought a railway extension to Port Maria on the north coast. But the select committee appointed to consider the petition reported that it could not recommend the proposal because the expected returns would not meet the cost of the line.²⁸ In response to mounting pressure, a select committee of the Legislative Council was named in April 1887 to consider the railway extensions and to report its findings to the council. In May of that year the Hon. W. Bancroft Espeut, a member of the Legislative Council, a planter in the north-eastern district of Portland and a leading advocate of the extension of the railway to Portland, was invited to speak on the matter at a public forum at the Institute of Jamaica. In his address, entitled 'The Advantages to Result from Railway Extension in Jamaica', he argued that the extension of the railway would serve to open up districts which were deprived of communications with the rest of the island – by impassable roads and an exposed sea coast which for weeks at a time during the rainy season was unnavigable to boats and ships. Portland is situated in the eastern Blue Mountain range, with rugged terrain, numerous streams and an extraordinarily high rainfall. Because of its geography and climate, roads were difficult to build and maintain. The sea provided the parish's main means of communication with other parts of the island and there was a thriving domestic food trade by sea between Portland and Trelawny, farther west.²⁹

Espeut also claimed that the railway extension would facilitate the further development of the banana industry by breaking the monopoly of the Boston Fruit Company on the industry.³⁰ The Boston Fruit Company not only had an almost total monopoly of the banana trade but had now become the largest single primary producer through its purchase or leasing of several former sugar estates in the eastern parishes which were placed under banana cultivation. Moreover, argued Espeut, the railway would link Kingston and Port Antonio, two of the most important ports in the fruit trade. According to Espeut,

This is a matter of enormous value to fruit growers, because it at once secures to them the choice of markets and best price for their fruits and it will entirely liberate the industry from the present injurious monopolies which now exists . . . it will enormously facilitate trade by bringing districts now out of reach of, in contact with, the metropolis of the Island, thus reducing the existing enormous cost of transacting business and of transporting all articles of consumption and production.³¹

Espeut further argued that the railway would serve to rationalise the Jamaican sugar industry with a centrally located processing plant in the

vicinity of Spanish Town, fed by a network of railways in the south central sugar district of Vere, off the Spanish Town to Porus main line. An extension from Spanish Town along the Foreshore to Kingston would also connect the Foreshore wharves to Kingston. In conclusion Espeut remarked that all that the island needed to make it prosperous and productive was a cheap, regular and dependable means of transport – and this was to be found in railways.

The day after his address, a report of the select committee recommending a detailed survey of a 119 mile expansion westward from Porus to Montego Bay and north-eastward from Bog Walk to Port Antonio was presented before the council. Money for the survey was raised by a loan and the work carried out by the Public Works Department at a cost of £41 per mile. The estimated cost of the fifty-four miles from Bog Walk to Port Antonio was £723,072, an average of £13,200 per mile, while the Porus to Montego Bay line was estimated to cost £832,399, an average of £12,893 per mile.³² In the event the proposed expenditure of £1,555,492 for the project was not authorised because of Jamaica's poor financial condition at the time. Instead a modified programme of extension involving the construction of thirty miles of railway from Porus to Skull Point and from Bog Walk to Orange River at a cost of £350,000 was recommended by a committee of the council, but again financial constraints prevented its implementation. The government just could not finance the venture and plans for railway extensions were shelved.³³

The hiatus was broken with 'privatisation' of the railways. In November 1888 the Governor, Sir Henry Norman, announced to the council that he had received an offer to purchase the railway from an American syndicate, represented by Mr Frederick Wesson, a New York merchant.³⁴ The Wesson syndicate, which was not a newcomer to railway building, sought to take advantage of the prospects which Jamaica offered.³⁵ But the proposed sale of the railway met with opposition in the Legislative Council, which ultimately led to its dissolution in December 1888. It was felt that the sale of the railway was the government's means of ridding itself of a financial burden. The majority of members returning to the *new* council were, however, in favour of the sale and a provisional agreement for the transfer was drafted by Henry Hocking, Attorney General of Jamaica, and Charles Farquharson, merchant and member of the Legislative Council, on behalf of the government of Jamaica, and Mr Wesson on behalf of his syndicate, on 29 March 1889. The draft was sent to the Colonial Secretary, who, after discussions with Hocking, Farquharson and Wesson in London, recommended that a Bill be brought before the Legislative Council for the transfer of the ownership of the railway. Before doing so, however, the Colonial Secretary made clear his doubts about the sale:

It should, however, be distinctly understood that I do not accept any responsibility for the scheme, nor do I press its acceptance upon the Council. The experience of other Colonies points to the conclusion that it is generally more advantageous for government to construct Railways than to grant concessions to companies for that purpose, even when the concession does

not, as in this case, include the parting with a flourishing railway in exchange for security which must be more or less of a speculative character.³⁶

On 10 June 1889 the Bill for the transfer was passed, and received the Governor's assent on 25 July.³⁷ Under the terms of agreement embodied in the Railway Extension Law of 1889, the West India Improvement Company (WIIC) – the name of the railway construction company formed by the syndicate in 1889 – agreed to pay the government £800,000, of which £100,000 was to be paid in cash, the remaining £700,000 in a 4 per cent per annum second mortgage bond of the company. It was further empowered to issue bonds to the extent of £320,000 immediately on formation, with further issues of £200,000 on the completion of each additional track section of twenty-five miles. The company also agreed to extend the railway from Porus to Montego Bay and from Bog Walk to Port Antonio, a total distance of 116 miles. It was further agreed that no less than twelve and a half miles of line should be laid within the first eighteen months of the incorporation of the company, and no less than twelve and a half miles per annum had to be completed thereafter until the rail extension had been completed. In addition the company was granted one square mile of Crown land of its choice for each mile of railway completed. The agreement also provided for the surrender of the railway to the government should the promoters fail to carry out the terms of the agreement. The transfer of the line was made on 1 January 1890, with Mr R. B. Campbell as General Manager of the company. With the completion of the Porus to Montego Bay line in 1894 and the Bog Walk to Port Antonio line in 1896, Jamaica had a total of 185 miles of railway lines stretching from the south-eastern to the north-western and north-eastern ends of the island (see Figure 1).

Given the fairly stringent terms of the government's agreement with the WIIC, little immediate benefit accrued to the island from the sale of the railway. Worse, by the end of the company's contract in 1898 it had acquired over 76,000 acres of prime Crown land in various parts of Jamaica. This generous grant, made at a time when land was becoming scarce, made the expansion of peasant agriculture in Jamaica more difficult.³⁸ However the long-term economic benefit was of immense importance. By providing cheap, fast and dependable transport into the interior regions the railway not only opened up these areas to the cultivation of existing crops but also allowed a further diversification of the island's agrarian economy.

The revenue from railway services increased steadily but profits were insufficient to enable the company to pay the first mortgage bondholders. Interest was in default in 1897 and again in 1898, and by order of the Supreme Court the company fell into receivership. In 1900 the government for the second time assumed responsibility for the railway.³⁹ This time it was administered as a department of government. In 1902 a Railway Advisory Board was established to advise the government on matters concerning rates and passenger fares. Although there were minor changes in its administrative structure, no major changes were made until 1960, when the company

was converted to a statutory corporation and renamed the Jamaica Railway Corporation. Its assets, valued at £6 million, were transferred to the corporation, with the government holding all the ordinary and unsecured stocks. The corporation became responsible for the railway's operation and finances. And, with the exception of matters of public interest, it was free from government control. The government, however, did retain the right to insist on the corporation continuing service which the latter might wish to abandon on economic grounds. In such cases the government was required to make up the loss incurred.⁴⁰

Railway extension peaked in Jamaica in 1900, and for the next seventy-five years less than fifty miles of new track were laid. But the call for further extension of railway lines into the interior to open up new areas for banana cultivation continued unabated. In response to the fast developing citrus industry in the upper Clarendon region of Chapelton and Frankfield, the council in 1911 authorised the expenditure of £90,000 for the construction of a thirteen-mile branch off the Montego Bay line, from May Pen to Chapelton. The line was completed in 1913 at a total cost of £86,055, and a further nine and a quarter miles linking Chapelton to Frankfield were laid in 1925. In 1921 a short extension of three miles from Linstead to New Works was opened on the Bog Walk to Ewarton extension. In 1942, to support the war effort, a six-and-a-half-mile branch line was constructed from Logan's Junction, one mile from May Pen, to the US military base at Fort Simmonds in Vernamfield. In 1956 the line was closed.

During the 1940s large deposits of bauxite were discovered in the interior of the island and the railways played an important part in its exploitation by providing transport from the mines to the ports. The Alcan company shipped its bauxite from Port Esquerville, a short distance from Bodles, utilising the existing main-line railway. In 1951 the company linked the two points with a two-and-three-quarter-mile line. Another aluminium company, Alcoa, not having this advantage, had to build a special eighteen and three-quarter miles of railway in 1962 to connect its Woodside mines with Rocky Point Port. This line was leased to the Jamaica Railway Corporation, but Alcoa provided the locomotives and operated and maintained the track and rolling stock.⁴¹ A further aluminium concern, the Kaiser Bauxite Company, built eleven and a half miles of independent track and seven and a half miles of sidings running from its mines in upper St Ann to Discovery Bay. In the early 1970s an American consortium, Alpart, built eleven miles of independent track to connect its refinery at Nain with Port Kaiser, near Alligator Pond, and the Reynolds company introduced short railways to link its mines with drying plants and ports. By 1975 there were 216½ miles of standard gauge track (1.435 m) in public hands and a further twenty-nine miles of private railways in Jamaica (see Table 1).⁴² No further railway construction has been undertaken since.

Table I Railway development in Jamaica, 1845–1962

	<i>Section</i>	<i>Distance (miles)</i>	<i>Accumulated miles (main- line)</i>	<i>Owners</i>
1845	Kingston–Angels	14.50	14.50	William and David Smith Jamaica Railway Co.
1845	Worthy Park Sugar Estate			William and David Smith Jamaica Railway Co.
1869	Spanish Town–Old Harbour	11.00	25.50	William and David Smith Jamaica Railway Co.
1876	Kingston Tramway	4.00		Jamaica Street Car Co.
1878	Kingston Tramway Extension	8.40		Jamaica Street Car Co.
1885	Old Harbour–Porus	24.40	49.90	Jamaica Government Railway
1885	Angels–Ewarton	14.50	64.50	Jamaica Government Railway
1894	Porus–Montego Bay	66.00	130.50	West India Improvement Co.
1896	Bog Walk–Port Antonio	54.50	185.00	West India Improvement Co.
1899	Rockfort–Papine (Kingston Tramway)	11.60		West India Electric Co.
1913	May Pen–Chapelton	13.00	198.00	Jamaica Government Railway
1921	Linstead–New Works	2.75	200.75	Jamaica Government Railway
1923	Kingston Tramway Extension	2.50		Jamaica Public Service Co.
1925	Chapelton–Frankfield	9.25	210.00	Jamaica Government Railway
1942	Logans Junction–Vernamfield	6.50	216.50	Jamaica Government Railway
1947	Linstead–Ewarton line closed			
1948	Tramway service discontinued			
1952	Bodles Junction–Port Esquivel			Alcan Bauxite Co.
1956	Vernamfield branch closed			
1962	Woodside–Rocky Point	19.5		Alcoa Minerals of Jamaica

Sources W. R. Long, *Railways of Central America and the West Indies* (Washington DC, 1925); Jamaica Railway Corporation, *The Railway in Jamaica* (Kingston, 1970).

II

No data on the number of passengers carried by Jamaica's railways prior to 1880 have been found. Thereafter the data indicate that, although passenger movements fluctuated, the number of rail travellers increased from 230,000 in 1885 to about 1.2 million in 1975 (see Table 2). This increase consisted of a steady rise in passenger figures between 1885 and 1930, a downturn between the wars, with a reprieve during the Second World War. Passenger movements during this period averaged over 1.3 million annually, and in 1942, a record year, 1.5 million passengers used the trains.⁴³ After the war, with the rapid influx of motor vehicles, the number of passengers fell again, although there was a strong recovery after 1950.

The growth in cargo hauled by trains appears more spectacular than that of passenger movement. Between 1914 and 1975, the period for which data have been found, freight tonnage increased from 168,000 tons to over 99 million tons (Table 2), significant growth occurring after 1950 with the rise of bauxite mining. Between the 1920s and 1950s the volume of freight hauled by rail remained relatively stable, declining slightly until the early 1950s. Between 1959 and 1975, however, there was a sensational increase

Table 2 Passenger and freight earnings on Jamaican railways, 1880–1975

Year	Passengers	Freight	Gross revenue	Expenses	Balance	Debt
1880	n.d	n.d	27,628	17,393	10,235	n.d
1885	230,000	n.d	32,019	18,017	14,002	n.d
1890	201,847	n.d	19,126	9,798	9,328	19,121
1895	384,611	n.d	80,791	56,493	24,298	42,598
1900	n.d	n.d	109,128	86,482	22,646	151,646
1905	n.d	n.d	134,569	78,470	56,099	146,308
1910	n.d	n.d	161,632	103,948	57,684	117,695
1915	593,000	n.d	154,721	127,288	27,433	119,909
1920	715,622	354,367	402,173	406,810	-4,637	138,577
1925	635,734	366,605	321,814	270,257	51,557	189,093
1930	757,475	374,900	395,421	302,194	93,227	183,529
1935	427,407	336,258	264,249	270,744	-6,495	90,564
1940	420,084	n.d	194,967	348,203	-153,236	57,293
1945	1,052,600	346,192	578,420	682,851	-304,431	49,094
1950	735,000	352,000	356,599	732,813	-376,214	n.d
1955	1,088,000	733,000	722,764	1,118,728	-396,064	n.d
1960	1,045,000	1,008,570	963,219	1,261,283	-298,064	n.d
1965	1,156,000	62,700,000	1,114,425	1,263,190	-118,765	295,000
1970	1,146,000	77,527,380	2,575,209	3,111,004	-535,795	1,860,855
1975	1,188,000	99,165,325	6,266,335	7,970,128	-1,703,793	3,400,000

Notes Prior to 1969 currency is in sterling, after that date in Jamaican dollars. Up to the end of the period JAS2 = £1. n.d No data.

Sources *The Handbook of Jamaica* (1946), pp. 510, 514; W. R. Long, *Railways of Central America and the West Indies* (Washington DC, 1925), p. 24; *Statistical Yearbook of Jamaica* (Kingston, 1973), p. 404; *ibid.* (1977), p. 411; *Annual Report of the Jamaica Government Railway* (1950), pp. 1, 6.

in rail freight – from 900,000 to 99 million tons, of which the haulage of bauxite and alumina accounted for the vast majority.⁴⁴

Railways significantly redefined the direction of Jamaica's economy. In the plantation economy railways encouraged the rationalisation of traditional crops such as sugar cane and encouraged the expansion of new plantation crops, thus diversifying and widening the scope of this sector. Rail transport came to play an integral part in the growth of the banana industry, which came to dominate Jamaica's exports by 1890 and which provided the major source of revenue for the company.⁴⁵ Bananas, unlike other crops, had to meet strict standards for export, so they had to be handled and transported with extreme care. The fruit had to be transported expeditiously to meet the deadline of shipment within two days of cutting; delays had serious effects on quality. Fruit that was bruised or damaged was rejected. The traditional method of transporting bananas, by road, either on pack animals or on animal-drawn carts, resulted in considerable damage to the fruit, limiting the scope and scale of the industry. Railways, with the advantage of speed, efficiency and lower cost, quickly became the transport of choice for bananas. In 1938 trains transported 60 per cent of the island's bananas and over 80 per cent of railway revenue was derived from this source.⁴⁶ There is a correlation between the economies of scale the Jamaican banana industry achieved by 1900 and the extension of the railway in the 1890s. The acreage under

bananas expanded from 10,000 in 1891 to 73,000 acres in 1934. The increase was most marked along the Port Antonio line.⁴⁷ Railways also influenced the growth of the coconut, cacao and citrus industries over this same period. The area under coconut production increased from 7,816 to 40,000 acres, while that of cacao increased from 1,231 to 11,474 acres. The export of citrus fruits increased from 4.1 million fruits to 89 million.⁴⁸ Like that of bananas, the rapid expansion of coconut and cocoa was most evident along the Port Antonio line.

Small peasant producers in the interior also came to depend on trains to transport their crops to market and ports. Much of the internal marketing of peasant crops was done by women – either female peasant farmers, the wives of farmers or independent women, referred to as higglers. The higglers' principal occupation was travelling from farm to farm buying provisions at farm gates and selling them in the urban markets for profit. Prior to the advent of the railway, donkeys and mules with hampers were the main means of transport, which limited the scale and scope of operations. The trains soon became the main means of transport and consequently widened and expanded economic opportunities for the peasantry. They allowed the expansion of production and of internal markets, especially in the western and central regions on the Montego Bay line, and made possible a more balanced supply of food products. Prior to the railway passing through the main agricultural areas, a bumper crop in one area usually resulted in depressed prices. The better distribution of crops brought about by the railway helped to balance out the seasonality of production. Crops from the interior could be moved in bulk over longer distances quickly and efficiently to the market place and thus compete with locally grown produce at competitive prices. Although there was no single price structure for provisions, improved communications brought an equalisation of prices. By the 1930s rail transport in Jamaica had given a substantial boost to the agrarian sector, and between 1891 and 1924 total farm acreage increased from 640,249 acres to 1,097,117 acres.⁴⁹

Railways in Jamaica benefited not only agriculture but also the commercial, manufacturing and mining sectors. Trains moved goods from Kingston to all points of the country in large quantities. Several manufacturing plants which developed in the interior were influenced by railways, which facilitated the transport of raw materials and finished or semi-finished products. Highgate Foods, formerly Cadbury, the island's chocolate factory, is located near the railway line in Richmond in the heart of the cacao-growing districts of the parishes of St Catherine and St Mary, while the Citrus factory and the Nestlé Jamaica Milk Products factory in Bog Walk are adjacent to the railway station.⁵⁰ The transport to factories of cacao, citrus and milk, produced by large and small-scale farmers all over the island, but especially in St Catherine and St Mary, was made possible by the railways. The bauxite and alumina mining plants in St Catherine, St Ann, St Elizabeth, Clarendon and Manchester owe their development to rail transport, and it is no exaggeration to say that it was thanks to the railways that Jamaica became a major bauxite-exporting country by the 1960s. Indeed, in the 1970s bauxite

accounted for 66 per cent of Jamaica's total exports and was the island's chief source of export revenue.⁵¹

Rail also facilitated a significant redistribution of the island's population. During the 1880s there was a drift of rural population to urban centres. This migration of peasants and workers was primarily a result of scarcity of land and poor wages in the agricultural sector. The capital, Kingston, was the first to experience this flow of migrants following the inauguration of the tramway service in Kingston in 1888 and the extension of the railway in the 1890s. By 1970 no less than 23.4 per cent of the island's population resided in Kingston.⁵² This rapid urbanisation was replicated elsewhere in the island. By the 1970s over 50 per cent of the total population of Jamaica resided in urban centres such as Kingston, Spanish Town, Portmore and Montego Bay. The railway had facilitated this massive population shift. Linking Kingston and the port towns with interior villages by cheap affordable transport, rail provided the means whereby the rural population could seek a better life in the towns. Undoubtedly population shifts have rendered some sections of the railway obsolete but similarly many towns such as May Pen and Mandeville, near the railway, as recipients of these migrants have grown rapidly.

The railway expansion of 1890 made inland transport in Jamaica cheaper for the general mass of population. Compared with road transport, freight rates and passenger fares on trains continued to be low throughout the period analysed here. The fare on a mail coach from Port Antonio to Kingston in 1894 was £2 5s, or 7½d per mile, and the trip took over a day. Hackney carriages charged 6d per mile within the town limits and 3s per hour, while the hire rate for a livery buggy to Port Antonio was £6 10s. By comparison rail fares were around 1d per mile first-class and ½d third-class. With daily wage rates in the 1890s ranging from 1s to 1s 6d for the mass of the community, the only alternative to rail transport was walking.⁵³ In 1919 fares were increased by 100 per cent and cargo rose by 75 per cent, but neither were raised again until 1959. Passenger fares were of two types: cheap rate (local train service) and express diesel rate.⁵⁴ The cheap rate in the 1970s stood at 2c per mile first-class, and 1.5c second-class return. Thus a return journey from Kingston to Montego Bay, a distance of 113 miles, cost \$4.25 or \$2.13. In comparison, rural bus fares in 1974 stood at 3c per mile one-way. Commenting on the low fare structure of the railways and the debilitating effect it seems to have had on the system, the chairman of the Jamaica Railway Corporation remarked in 1959:

Tariff was unrealistic in days of keen competition . . . rates for bauxite haulage were fixed in 1948 for 25 years. These rates are of special character and provide a small margin of gain per mile . . . The convenience of cheap travel facilitates as an aid to public education is a laudable service . . . Passenger fares are generally on the low side and concessions which stem from custom . . . may have good reasons but no place in railway economics.⁵⁵

Cheap fares were one reason for the continued competitiveness of passenger rail transport. Rail facilitated a mobile labour force and as such served to

redistribute labour on the island. Workers could move easily from areas of low to areas of high employment, and commuting schoolchildren in several areas of the island, where road transport was either too expensive or unreliable, came to rely on passenger trains.

III

By the 1930s, however, it was evident that the growth potential which railways held for the economy, especially the agrarian sector, had reached its limit. From this point onwards rail transport in Jamaica began a steady decline. Problems in agriculture, especially in the banana industry, which was the railway's primary income earner, increasing competition from motor vehicles and the chronic indebtedness of the Jamaica Railway Corporation eventually plunged the company into bankruptcy. Rationalisation of the sugar industry and the fact that sugar was increasingly transported by road by the 1960s hit the railways hard. The banana industry was beset with a plethora of difficulties⁵⁶ and banana exports, which had grown from 330,000 stems in 1880 to 24 million stems in 1930, declined sharply after that date. After 1969 the transport of bananas by rail ceased. In the citrus industry the loss of the British market in 1950 and the hurricane of 1951 were severe blows.⁵⁷ In 1895 the island had exported 97 million fruits; by 1940 the figure had plunged to 40 million, and in 1975 it was just 5 million.⁵⁸ The decline in bananas and citrus output gravely affected the railway's capacity to generate revenue and aggravated the financial problems of the company. The Port Antonio and Frankfield lines, which relied heavily on banana, citrus and sugar traffic for their revenue, were both severely hit. By the 1970s Jamaica's railways had ceased to be the principal carrier of agricultural crops and, had it not been for the bauxite industry, they would have totally collapsed – in 1975 bauxite and alumina accounted for over 95 per cent of railway cargo.

As motor vehicles became available the monopoly that rail had had gave way. The automobile, which began making its appearance in 1930, ended not only this monopoly but railway expansion as well.⁵⁹ Beginning in the 1890s, in the years that the Kingston to Port Antonio and Kingston to Montego Bay railway lines were being constructed, the government embarked on a road and bridge construction programme to the extent that by 1971 the island had over 7,200 miles of roads accessible to motor vehicles, 1,350 of which were paved.⁶⁰ Between 1950 and 1975 the number of motor vehicles in Jamaica increased from 15,000 to 142,300.⁶¹ Motor buses plying between rural and urban centres, lorries and trailers, taxicabs and private motor cars competed with rail transport for passengers and cargo. Lorries successfully displaced trains as the principal carrier not only of sugar and bananas but also of peasant produce and other goods. Commenting in 1939 on this competition, and measures that should be taken to alleviate it, the manager of the railway stated:

If the road traffic law were rigidly enforced the railway might hope to obtain a large amount of business which now goes to motor trucks and omnibuses.

While if a limited number of licences are granted sufficient to handle the island's business it might mean a better service to the public, a reduction in the cost of road maintenance and an increase of railway revenue . . . the control of road transport and control of railway expenditure are most important. To regain traffic the railway has reduced its own rates and fares and improved amenities. The cost of operating . . . steam passenger trains is much in excess of the revenue earned. It is my intention . . . to gradually replace these unprofitable steam services with light diesel rail coaches.⁶²

The Second World War brought a temporary reprieve from road competition as shortages of fuel drastically cut motor vehicle operations, but after the war competition resumed with greater intensity. It was clear that serious rationalisation had to be made within the system in order to gain as much traffic as possible and the government was encouraged to introduce legislation to restrain competition. The governor commented in 1946 on the effect of competition from motor vehicles on the financial position of the railways:

The railroad operations is at a loss caused by competition from road transport . . . the drop in traffic made it necessary to carry out a progression of curtailment of services and entrenchment of staff. Unprofitable services were reduced and the conversion of engines from steam to diesel was begun . . . more than one half of the trains are diesel engines . . .⁶³

In 1945 C. E. Rooke had been engaged by the government to undertake an investigation into Jamaica's transport services. His report, which was published in 1946, alluded to the failure of the railways and questioned their future, especially with the declining banana industry.⁶⁴ It pointed out that, even in the war years, when the railway had a monopoly of inland transport, its operational costs far exceeded its revenue because of the unsuitability of much of its traffic. The report recommended the closure of the Port Antonio to Spanish Town line, but in the event the government closed only the Linstead to Ewarton branch in 1947. A World Bank mission, sent in 1952 to examine the recovery prospects of the economy after the 1951 hurricane, argued for the retention of the railway because of the prospects for bauxite traffic and for its service to passengers. It noted that the railway's abandonment would create the need for extensive capital investment in road transport which the Jamaican economy could not afford. The inability of the railway to deal with its rising costs was a result of years of disinvestment and the age of its capital assets. The mission therefore recommended a rehabilitation programme requiring expenditure of £670,000 to cover equipment modernisation and repairs. It felt that this expenditure could be justified if the railway increased its artificially low freight rates and if its management had a more autonomous structure.

In 1955 the railways' modernisation programme was drawn up. The central feature was to replace steam engines with more efficient diesel locomotives and convert the railways from a direct government department to a statutory corporation. Diesel power offered considerable savings; for example, fuel and

lubricant costs per mile for the steam locomotives were between four and a half and five times higher than for diesel. This 'dieselisation' of the railways had its early beginnings in 1939 when two diesel coaches were ordered from the British firm of D. Wickham & Co.⁶⁵ But nothing more seems to have happened until 1963, when twenty multi-unit railcars with Rolls-Royce C6T Mark IV engines of 350 g.h.p. driving two axles on one bogie through a twin-disc torque converter were acquired from the Metropolitan Cammell Carriage & Wagon Company at a cost of £621,000. Seven of these cars were composite, each carrying twenty first-class and fifty-eight second-class passengers. The remaining thirty accommodated eighty-three second-class passengers each. There was also one special-purpose car, peculiar to Jamaica, known as 'the market car wheel', a modified boxcar fitted with seats and windows, to carry passengers and their goods to market. Two shunting locomotives with the same engine, torque converter and final drive, but driving each axle on both bogies, were bought of Clayton Equipment Company the same year. In 1963 two 750 h.p. English Electric locomotives were acquired to handle the bauxite traffic, with a further two 1,050 h.p. diesel-electric locomotives bought from the American Locomotive Company in 1967. By 1970 Jamaica's railways had fourteen diesel-electric locomotives and only one steam locomotive was still in operation.⁶⁶

The diesel railcars proved popular with commuters and their introduction explains the increase in passengers using Jamaica's trains during the 1960s and 1970s. They were faster, more spacious and had more comfortable seats than the steam trains they replaced. Passenger revenue increased by 118 per cent between 1962 and 1969, with the cost of fuel and lubricant decreasing by 30 per cent.⁶⁷ The Metro-Cammell railcars, however, were a poor investment: they were costly to maintain and problems with their axles made them subject to constant breakdowns. By 1967 several had been withdrawn from service.

The tempo of Jamaica's rail modernisation programme was increased as a result of a catastrophic disaster on 1 September 1957. On that occasion 1,600 tourists were returning to Kingston from an excursion to Montego Bay, crammed into twelve wooden cars, when the train derailed at Kendal, killing 175 passengers and injuring over 800. The cause of the accident was brake failure but the high number of casualties was largely due to overcrowding and the wooden construction of cars. Over 120 persons had been crammed into coaches designed for eighty and the wooden frames shattered into lethal spikes, causing many of injuries. A major outcome of the crash was the replacement of wooden coaches with cars manufactured from steel and fibreglass. The report of the commission of inquiry into the crash – the worst in Jamaica's history – blamed the accident on negligence on the part of the railway company's top management.⁶⁸

IV

Rail transport was not a profitable enterprise in Jamaica and this became even clearer from the 1930s. Only in the early years of operation could the

railway be considered profitable and even then the profit merely covered operational costs; it was for this reason that the owners divested themselves of the railways in 1879 and again in 1900. Between 1886 and 1900 the railway showed modest net profits, but debt charges were high. At the time of take-over in 1900, while the company had a net balance of receipts over expenditure of £22,646, there was a debt charge of over £151,600.⁶⁹ Thanks to the devastation caused by the 1903 hurricane the railway was not able to make a profit again until 1905, and even then the surplus of £56,009 was outweighed by debt charges of £146,000. The earthquake in 1907 led to a period of further losses, and no significant profit was made again until 1911. From this date up to 1920 moderate profits were made, but thereafter the economic fortunes for the railway fluctuated again. From 1933 receipts rarely exceeded expenditure and debt charges remained high; from the beginning of the 1940s losses became the norm. By 1973 the railways' deficit had risen to J\$3.4 million,⁷⁰ and in 1975 it was nearing J\$4 million.⁷¹ Jamaica's railway now relied on loans and government subsidies for its survival. In 1975 the company was carrying a J\$11 million loan and the government was paying over J\$1.4 million in subsidy to keep the island's trains running.

The maintenance of the railway by the government had become a drain on revenue. During the 1960s Jamaica's economy experienced a period of relative growth, with GDP rising by an average of 5 per cent per year.⁷² But this prosperity was short-lived. During the 1970s the balance of trade turned against Jamaica and the balance of payments and the public sector accounts were both in deficit. The government's nationalist policies resulted in a greater level of intervention in the economy, with the state acquiring several enterprises, many of which were unproductive and unprofitable. In spite of serious budgetary constraints, the Jamaican government continued to finance and subsidise rail services. However, the railways were now the victim of 'deferred maintenance'; the upkeep of track and buildings, and the replacement of old rolling stock, were all neglected. In 1974 the May Pen–Frankfield line was closed, with the Bog Walk–Port Antonio line closing the following year on account of the deplorable condition of the tracks.⁷³ These closures signalled the beginning of the end of public rail transport in Jamaica; by 1975 it was speeding towards the end of the line.⁷⁴

Notes

- 1 Rondo Cameron, *A Concise Economic History of the World* (New York, 1989), p. 202; see also Michael Robbins, *The Railway Age* (Manchester, 1998), p. 23.
- 2 Walt W. Rostow, *The World Economic History and Prospects* (Austin TX, 1978), p. 153; Robert Fogel and Stanley Engerman, 'Railroads and American economic growth', in Robert Fogel and Stanley Engerman (eds), *The Reinterpretation of American Economic History* (New York, 1971), pp. 187–207.
- 3 Jamaica became a British colony in 1655, and from the 1680s the island was drawn into the export economy with the development of sugar plantations worked by slaves imported from Africa. Slavery ended in 1838 but the island continued in this colonial relationship until 1962, when it was given its independence.

- 4 There are contradictory views on the value and profitability of British Caribbean slavery to Britain. For a discussion of these views see Richard Sheridan, 'The wealth of Jamaica in the eighteenth century', *Economic History Review* 18 (1965), pp. 290–311; Eric Williams, *Capitalism and Slavery* (1944), chapters 4–7; R. P. Thomas, 'The sugar colonies of the old empire: profit or loss for Great Britain?' *Economic History Review* 21, 1 (1968), pp. 30–45; T. G. Burnard, '“Prodigious Riches”: the wealth of Jamaica before the American revolution', *Economic History Review* 54, 3 (2001), pp. 506–24.
- 5 Slaves were allotted small plots of land on which they were expected to grow crops for their subsistence. However, they made this into a business by producing a surplus for sale in the internal market. This small-scale production of food described by Mintz as a 'proto-peasantry' was to grow and expand rapidly into a vibrant Afro-Jamaican peasantry after emancipation. Peasant and peasantry are well established and acceptable concepts used to describe the West Indian small-scale producer class. Unlike their European and more traditional counterparts, who were primarily subsistence producers, the West Indian peasants had to produce a surplus for sale, since they operated in a cash economy. The Jamaican peasant not only produced food (yams, cocos, sweet potatoes, bananas, plantains, vegetables, small livestock, etc.) for the local market but also produced coffee, bananas, citrus and other minor crops for export. Some also produced sugar cane for the large sugar factories. See Sidney Mintz, 'A note on the definition of peasantries', *Journal of Peasant Studies* 1, 1 (1975), pp. 91–106; Douglas Hall and Sidney Mintz, *The Origins of the Internal Market System* (New Haven CT, 1960); Veront Satchell, *From Plots to Plantations* (Kingston, 1990), pp. 53–9.
- 6 Edward Long, *A History of Jamaica* (1774) I, pp. 466–70, II, pp. 52–3.
- 7 Lowell Ragatz, *The Fall of the Planter Class in the British Caribbean, 1763–1834* (New York, 1928), p. 11.
- 8 B. W. Higman, *Slave Population and Economy in Jamaica, 1807–43* (Cambridge, 1976), pp. 20–1, 39–40; *Jamaica Surveyed: plantation maps and plans of the eighteenth and nineteenth centuries* (Kingston, 1989), p. 85.
- 9 Estate produce was normally transported by carts drawn by eight to sixteen animals (cattle or mules) transporting four to six hogsheads of sugar each weighing about 1,700 lb.
- 10 Britain pioneered railways with the opening of the Stockton & Darlington Railway in 1825. In 1830 the Liverpool–Manchester railway was the first designed specifically for steam locomotives as a common carrier. See Rondo Cameron, *A Concise Economic History of the World* (New York, 1989), p. 202.
- 11 Spanish Town was the capital of the island until 1872, when the capital was moved to Kingston, the chief port and commercial centre. For a discussion of this inauguration see Dahlia Thompson, 'An Assessment of the Economic Arguments for the Extension of the Railway in Jamaica in the late Nineteenth Century, 1880–1914', unpublished Caribbean Studies, University of the West Indies, Mona (1996), p. 9; *Jamaica Dispatch*, 22 November 1845, p. 10.
- 12 W. Rodney Long, *Railways of Central America and the West Indies* (Washington DC, 1921), p. 326.
- 13 Thompson, 'An Assessment', p. 15.
- 14 For a discussion on the Sugar Duties Act and the Jamaican planters' reaction see Douglas Hall, *Free Jamaica* (Barbados, 1964), pp. 82–94.
- 15 *The Railway in Jamaica, 1845–1970* (Kingston, n.d.), p. 3; Thompson, 'An Assessment', p. 10. In 1867 the number of parishes in the island was reduced from twenty-two to fourteen. The neighbouring parishes of St Thomas in the Vale, St John, St Dorothy and St Catherine merged to become one parish, St Catherine. Angels is situated just a few miles south of St Thomas in the Vale. See *Laws of Jamaica*, Law 20 of 1867.
- 16 See *Votes of the Honourable House of Assembly of Jamaica* (1843), p. 256.
- 17 Central factories separated the production from the cultivation phases of the sugar plantations. Traditionally the sugar planter was both farmer and manufacturer. Central factories allowed planters to concentrate on the farming phase. One factory was centrally located and it was fed cane from neighbouring plantations. Although central factories developed in Cuba, British Guiana and Trinidad from the early nineteenth century it was not until the early twentieth century that they were established in Jamaica. See Hall, *Free Jamaica*, pp. 76–9; Richard Pares, *Merchants and Planters* (Cambridge, 1960), p. 23.
- 18 It was for this reason that Richard Hill, Secretary of the Stipendiary Magistracy, supported the scheme. (Thompson, 'An Assessment', p. 16.)
- 19 *Handbook of Jamaica* (1888/89), p. 481; *Railway in Jamaica*, p. 3.

- 20 Other locomotives suitably christened *Emancipation*, *Enterprise*, *Success* and *Perseverance* followed these pioneering locomotives. (*Handbook of Jamaica*, 1888/89, p. 481; W. F. Maudner, 'Notes on the development of internal transport in Jamaica', *Social and Economic Studies* 3, 2, 1960, p. 2.)
- 21 With the wide-scale abandonment of estates immediately after 1838 the main plantation crops, sugar and coffee, suffered decline. Sugar output declined from 53,000 tons in 1838 to 30,000 in 1869, while the number of estates in operation fell from 664 in 1838 to 316 in 1867. In 1808 there were 607 coffee estates in the island; between 1838 and 1847, 465 were abandoned; by 1900 there were only thirty-nine. Coffee output, which stood at 5,500 tons in 1838, fell to 1,500 tons in 1849. Output, however, increased dramatically after that date, but this was due primarily to peasant production. See Gisela Eisner, *Jamaica, 1830–1930* (1974), p. 244; Satchell, *Plots*, pp. 44–8.
- 22 Thompson, 'An Assessment', p. 16.
- 23 *Ibid.*, p. 17; *Handbook of Jamaica* (1888/89), p. 478, (1971), p. 255.
- 24 Thompson, 'An Assessment', pp. 21–2; *Handbook of Jamaica* (1888/89), p. 481.
- 25 Banana exports increased from 0.01 per cent of total exports to 2 per cent between 1867 and 1880; by 1900 output had escalated to 35 per cent. (Satchell, *Plots*, p. 49.)
- 26 *Ibid.*, p. 49.
- 27 *Ibid.*, p. 109.
- 28 *Ibid.*, p. 28.
- 29 *Ibid.*, p. 52.
- 30 The American-based Boston Fruit Company, later the United Fruit Company, had by 1890 monopolised and controlled the local fruit industry to the detriment of both large and small-scale local producers. Some degree of competition came from the UK-based company of Elder's & Fyffe's by 1899, but this was short lived with the 'American agreement' in which the United Fruit Company bought 45 per cent of shares in the company. See Peter N. Davis, *Fyffe's and the Banana: Musa sapientum. A centenary history, 1888–1988* (1990), pp. 120–75; Patrick Beaver, *Yes, We have Some! The Story of Fyffe's* (1976).
- 31 W. Bancroft Espeut (Kingston, 1889), p. 9.
- 32 See *Minutes of the Legislative Council of Jamaica* (1885); *Annual Jamaica Departmental Report* (1885).
- 33 Thompson, 'An Assessment', pp. 27–8.
- 34 *Minutes of the Legislative Council* (1889), p. 3
- 35 Another proposal for the purchase of the railway was received from Messrs Leech Harrison & Forwood of Liverpool in March 1889, but was turned down in favour of the West India Improvement Company. (*Minutes of the Legislative Council* (1889), p. 3.)
- 36 Appendix F, 'Despatch from the Secretary of the State and letters from Messrs Leech, Harrison and Forwood on Railway scheme', *Minutes of the Legislative Council* (1889), pp. 3–11.
- 37 *Minutes of the Legislative Council* (1889), pp. 4–11; *Laws of Jamaica*, Law 12 of 1889.
- 38 By 1898 land once again became concentrated in the hands of large entities, including multinational corporations and foreign and local capitalists. (Satchell, *Plots*, p.109.)
- 39 The railway has since continued to be a publicly owned entity. Public services were suspended in 1992, since when the railway lines and rolling stock have been leased to the bauxite companies.
- 40 *Handbook of Jamaica* (1971), p. 255.
- 41 *Ibid.*, p. 758.
- 42 Some sources give the total length as 230 miles or 370 km. See *CIA Factbook Transportation – Country: Jamaica* at www.ciafactbook.com; www.geographic.org. In addition there were railways on sugar and banana estates, and tramways in the Kingston metropolitan area and railway lines were laid to facilitate the bauxite mining industry. In 1846 one of the first colonial estate railways was established at Worthy Park Estate, situated in Lluidas Vale, St John. The United Fruit Company introduced estate railways in areas of Port Morant, St Thomas and Gregory Park, St Catherine, to facilitate the transportation of bananas from banana plantations which were some distance away from the main-line rail-head in those areas. The use of light locomotives on the estate railways became more widespread after the First World War. Estate railways were dismantled in the 1950s, when mechanised systems of loading cane, bananas and other crops directly into motor lorries developed. The lorries took crops direct to the factories, ports or buying stations. The Kingston Tramway Transport system was inaugurated with a four-mile track laid by the Jamaica Street Car Company in 1876. It was increased to twenty-seven and a half miles by

1930. Tramways, like mainline railways, proved to be a very popular mode of transport. By 1884 over one million passengers were being transported annually. Competition from motor vehicles forced the tramway to close in 1948. See Carol Mae Morrissey, "Ol' time tram" and the Tramway Era, 1876–1948,' *Jamaica Journal*, 16, 4 (1983), pp. 12–21.
- 43 *Annual Report of the Jamaica Government Railway* (Kingston, 1950), p. 3.
- 44 See government report on the Jamaica Railway Corporation (1998) in the *Daily Gleaner*.
- 45 With innovation in shipbuilding and the introduction of refrigeration, by 1900 the banana export market had expanded beyond the United States to the United Kingdom and later to Rotterdam. For a discussion of these innovations and their impact on the banana industry and market see Davis, *Fyffe's and the Banana*; Beaver, *The Story of Fyffe's*. See also *Departmental Report* (1930), pp. 8–9.
- 46 *Departmental Report* (1938), p. 175.
- 47 St Catherine, St Mary, Portland and St Thomas accounted for 92 per cent of all banana plantations in 1900, St Mary and St Catherine alone accounting for 63 per cent. In 1930 Jamaica exported over 24 million stems of bananas valued at nearly £2 million. See Satchell, *Plots*, p. 49; *Handbook of Jamaica* (1936), p. 387; *Departmental Report* (1930), pp. 8–9.
- 48 *Departmental Report* (1903), p. 173; Satchell, *Plots*, p. 41.
- 49 *Departmental Report* (1924), p. 186.
- 50 The Nestlé Jamaica Milk Products Condensery was opened in 1940. It purchased milk from dairy farmers all over the island, collecting it in trucks along set routes for transport by rail to the factory. In 1947 it collected 7 million quarts of milk and produced 187,000 cases of condensed milk. (*Departmental Report*, 1947, p. 36.)
- 51 *Statistical Yearbook* (1981), p. 175.
- 52 By 1991 Portmore had an annual growth rate of 2.3 per cent, the highest in the island. Kingston and St Andrew was second, with 1.74 per cent. (*Statistical Yearbook*, 1993, p. 78.)
- 53 Eisner, *Jamaica*, p. 220.
- 54 *Annual Report of the Jamaica Government Railway* (1921), p. 3, (1959), p. 3.
- 55 'Administrative Report of the Affairs of the Government Railway during the Financial Year ended 31 March 1959', in *Annual Report of the Jamaica Government Railway* (1959), pp. 1–2.
- 56 The Gros Michel variety, on which the banana industry was built, was most susceptible to these diseases. To ameliorate the industry the more disease-resistant Lacatan and later the Valery varieties of bananas were introduced. See *Departmental Report* (1938, 1945); *Handbook of Jamaica* (1970); Davis, *Fyffe's and the Banana*, p. 179.
- 57 In 1950 the UK Ministry of Food stopped purchasing citrus from Jamaica. The following year a hurricane destroyed many of the citrus farms in Clarendon, Manchester and St Catherine. (*Departmental Report*, 1951, p. 40.)
- 58 B. W. Higman, *Abstracts of Caribbean Historical Statistics* (Kingston, 1986), table xii/12.
- 59 The automobile came to symbolize twentieth-century economic development as rail transport had in the nineteenth. The first automobile emerged during the 1890s. In 1913 there were 400,000 motor vehicles in the United Kingdom, France and Germany. In the United States there were 79,000 vehicles in 1905; by 1938 there were 29.4 million. As a result of mass production car prices fell drastically, from \$1,000 in 1890 to \$350 in the 1930s, and thus became affordable by the common man. See Cameron, *Economic History*, pp. 335–6; W. W. Rostow, *The World Economy* (1978), pp. 196–7.
- 60 See Law 17 of 1890, Law 4 of 1898; Patrick Bryan, *The Jamaican People, 1880–1902* (Warwick, 1991), pp. 143–4.
- 61 *Statistical Yearbook* (1978) p. 404.
- 62 *Annual Report of the Jamaica Government Railway* (1939), p. 3.
- 63 *Departmental Report* (1946), p. 62.
- 64 C. E. Rooke, *Report on Transportation in Jamaica* (Kingston, 1946), p. 10; see also Fredrick Dawson Hammond, *Report on Transport Problems in Jamaica* (Kingston, 1923).
- 65 *Departmental Report* (1938), p. 175.
- 66 *Annual Report of the Jamaica Government Railway* (1971), p. 15.
- 67 *Handbook of Jamaica* (1971), pp. 757–8.
- 68 *Daily Gleaner*, 16 September 1957, 11 May 1958.
- 69 *Handbook of Jamaica* (1971), p. 255.
- 70 In 1969 Jamaica ceased to be a member of the sterling area with the introduction of the Jamaican dollar. The exchange rate then was J\$2 = £1.

- 71 See *Annual Report of the Jamaica Government Railway* (1921, 1939, 1950, 1960, 1974, 1984, 1989).
- 72 'World Bank group countries: Jamaica', www.worldbank.org (2000), p. 1.
- 73 Public pressure forced the government to rehabilitate parts of the Port Antonio line at a cost of J\$1.4 million, and it was reopened temporarily in 1977. The condition of the track continued to be unsatisfactory, resulting in the indefinite closure of the line in 1978. The hurricane of 1988 wreaked further havoc on this line by totally destroying an entire section running along the sea coast between Buff Bay and Orange Bay, Portland.
- 74 In October 1992 public rail transport services finally ceased operating on the island.

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