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GOLD COAST RAILWAYS: THE MAKING OF A COLONIAL ECONOMY,
1879-1929

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Submitted as a PhD Thesis

UNIVERSITY OF GLASGOW

Faculty of Social Sciences

September, 1986

ACKNOWLEDGEMENTS

There are many individuals and institutions who provided valuable assistance during the period of study in which this *research* was undertaken, and the following acknowledgements do not exhaust the list of debts I owe to others.

The University of Ghana Staff Development Scheme provided the funding which made it possible for me to embark on the research in the first instance, and when this ran into problems the African Education Trust, the Mountbatten Fund through the University of Glasgow, and family and friends were kind enough to come to my aid.

Dr J. Forbes Munro assumed the onerous *task* of supervising the *research* and helped in numerous other respects by extending his assistance well beyond the limits of formal responsibility. . . Until his unfortunate illness and premature death, Dr Neil Charlesworth provided very useful advice and criticisms in the capacity of assistant supervisor. Throughout the study, the doors of other members of staff of the Economic History Department were widely opened to my consultation, and in particular, thanks are due to Mr T. Hart and Dr C. Munn. The secretarial staff also deserve special mention. Mrs Blythe O'Driscoll and her colleagues were always considerate in dealing with my enquiries.

Generally I remain indebted to the support given by my colleagues and friends in Glasgow. More personal thanks are due to Susan, Jenny, Scott and Nicky for their encouragement, and Susan in particular for typing the thesis on *very* friendly terms.

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ABSTRACT

There has been no systematic study of railway innovation in Colonial Africa. Research suggests that such an omission leaves an important gap in the economic literature on Colonial Africa, and that railway projects were of significance in the development of Africa's trade and commerce. This thesis examines the early railway development in the Gold Coast within the context of transport innovation and economic development in Africa.

The thesis is divided into three parts. Part I accounts for the policy decisions leading to railway construction in the Gold Coast, and how this resulted in a particular configuration of railway lines and associated ports and harbours. The needs of the British economy, at particular points in time, for the development of greater overseas markets, and access to better sources of raw materials, are examined in a chronological manner. How each step in the process contributed to the introduction and expansion of railways in the Colony is also evaluated and understood. Decisions as to where tracks were to be placed and where ports and harbours were to be sited were found to be primarily dictated by the location of mineral deposits - mainly gold and manganese - so that the lines were not intended to stimulate internal commerce and industry directly. The strategic interests of the Colonial Government in building the pioneer railway line from Farkwa to Kumasi, and the implications of this particular extension for Ashanti politics is also highlighted.

In Part II consideration is given to the study of the railways as a commercial or business enterprise, - how it was organised,

how it mobilised the resources and skills needed for the construction and operation of the transport system. Attention is focussed on the details of the recruitment of railway workers, the acquisition of land, the mechanisms by which funds were raised to pay for the lines, and the management and conduct of labour relations in an attempt to elucidate overall colonial policy regarding issues of public finance, land tenure and labour in the Colonies. The financial constraints of railway investment on the Colonial Government's activities in other sectors of the economy - more especially rural development - are noted as were the ambiguities of land titles which acted as a constraint on the natural urban and commercial developments following from railway construction. Light is thrown on the limitations of spin-off effects from a technology developed and perfected in one part of the world and replanted wholesale into another, and in particular, the relatively low levels of skills acquisition among African railway workers. The overall efficiency and profitability of the railways are then discussed where it is suggested that a combination of motor competition, improvements in operational efficiency, and the onset of the Great Depression, led to a diminishing return in Gold Coast railway investment by the late 1920's.

In Part III the potential impact of new modes of transportation on economic activity in a part of the world which was previously seriously deficient in internal transport and communications are evaluated. Amongst the social and economic impacts discussed are backward linkages from the railways to local production, the role of the railways in stimulating external vs internal trade on the one hand, and extraction of minerals and forestry resources vs agricultural developments on the other. The effects on output and employment in

commerce and traditional craft production, and the role of the railways in transforming the urban landscape of the Gold Coast and its implications for public health, are also discussed. A concluding chapter then relates the findings of the individual chapters to the concern of the thesis as a whole: the connection between railway innovation and economic development in the less developed economies of Africa, Asia and Latin America. In the first place, gains accruing from the provision of transport services were found to be generally higher than in the advanced industrial economies. But backward linkages and spin-off effects to local production were negligible and instead railway investment tended to reinforce existing technological and financial dependence on the advanced industrial nations. The pattern of railway development and its accompanying social and welfare investments were also found to be heavily biased in favour of external trade and urban development, while the rural communities remained relatively underdeveloped.

The thesis thus suggests the need for a simple mode of transportation that would provide significant backward linkages to local production, and at the same time carry a second transport 'revolution' further to the doorsteps of the African rural communities.

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INTRODUCTION

The importance of railways in the political economy of Colonial Africa was recognised almost as soon as the railway systems were established, and was stressed by contemporary administrators¹ and scholars² alike. Sadly though, despite the upsurge of scholarly interest in the economic history of Africa since the mid 1960's detailed studies of either the impact of railways on particular sectors of the African economies³ or accounts of railways themselves are still hard to come by.⁴ In his book The Economic History of West Africa⁵ Hopkins drew attention to this dearth of literature on the history of railways in Colonial Africa, but more than ten years have since passed, and his hope that the comment would generate scholarly interest in the subject remains unfulfilled. This is in striking contrast to the well-documented studies of the West African shipping trades.⁶ This lack of interest in the study of African railways is particularly disappointing because the influential role which railways have played in Western economic growth⁷ leads one naturally to ask whether Western experience has been repeated in Africa, and if not how the differences may be explained. This thesis is a contribution to the study of railways in colonial Africa, and more specifically, to that of the Gold Coast, modern Ghana.

Despite the lack of detailed studies many works dealing with Africa's Colonial past have made either explicit or implicit assumptions about the nature or impact of railway construction, but there has been nothing like the relative consensus about the 'progressive' contribution of railways to economic development that characterises the literature

on the history of railways in Western Europe and North America.⁸ This is mainly because the views and arguments expressed about railways in Colonial Africa merely reflect trends in the economic literature on Colonial Africa itself. On the one hand there is a tradition of scholarship deriving from nineteenth and early twentieth century protagonists of liberal imperialism,⁹ and the post war 'modernisation' school of thought,¹⁰ which sees railways in Colonial Africa in terms of the 'diffusion' of technology and the associated spread of the social and economic organisation of the advanced capitalist societies into 'traditional' societies. Thus "the material development of Africa lies in one word - 'transport'"¹¹ (Lugard) and "railways are the seven pillars of unequal wisdom in West Africa" (Pedler).¹² Indeed Marx himself writing on British India envisaged railways performing a similarly influential role in capitalist development there as it had in the West.¹³ On the other hand, there is the post-war Marxist and nationalist schools of thought which reject this "optimistic view" about the progressive role of capitalism, and for that matter, railways in Africa. They argued that there was, and still is, a fundamental contradiction between capitalist development in the Colonies and capital accumulation in the metropolis because the principal aim of the Western bourgeoisie was to incorporate the colonies into the world market primarily as consumers and primary producers, rather than as rival secondary producers. The result of this process is the development of underdevelopment, and from this perspective railways are merely regarded as the living testimonies of the perpetuation of this underdevelopment.¹⁴ However, there is presently a reaction to the dependency approach, one important element of which is a reassertion of Marx's optimistic view about the progressive development of capitalism on a world wide scale.¹⁵

The argument of this thesis starts from the assumption that any failure on the part of railways in Colonial Africa to reproduce the experiences of their Western progenitors requires investigation, and cannot be explained away simply in terms of a "conspiracy" on the part of the metropolitan bourgeoisie to "create" underdevelopment. In this context a study of Gold Coast Railways may assist in our understanding of the nature and effects of railway and for that matter the penetration of Western capitalism into Colonial Africa. In which ways, if any, did the construction and operation of railways contribute to development or underdevelopment in Africa? If the latter was the case, was there any evidence of an "invincible" determining hand behind the scene?

In the particular context of the Gold Coast and the economic literature on railways, the picture is not very different from that of the general African pattern - neither quantitatively nor qualitatively. The one published book on the Gold Coast that approaches a detailed study of railways is Gould's Transportation Pattern in Ghana.¹⁶ However, as a Geographer, Gould's primary concern was to measure the spatial movement of traffic rather than to provide a comprehensive account of the railways. Other works impinging on the role and impact of railways include MacPhee,¹⁷ Kay,¹⁸ Howard,¹⁹ and Dickson²⁰ - to mention the better known. But none of these works have been based on any close empirical study of the railways themselves. The present work then differs from all the others in that it seeks to provide a comprehensive account of early railway development in the Gold Coast, and its impact on the Colonial economy.

The thesis is divided into three parts, each of which focusses

on different aspects of railway development and operation. Part I accounts for policy decisions leading to railway construction in the Gold Coast and how this resulted in a particular configuration of railway lines and associated ports and harbours. This is, to a considerable extent, a "task" which has to be handled in a chronological manner, so that each step in the process can be evaluated and understood. This will also enable us to establish the "intentions" behind railway innovation in Africa as distinct from the "effects" of the railways. One of the weaknesses of the dependency approach is its failure to draw this distinction and hence the tendency to regard the existence of one as evidence for the other. This work is carried out in Chapters 1 - 4.

Part II examines the railways as a business or commercial enterprise - how it was organised, how it mobilised the resources and skills needed for construction and operation. In adopting this approach I am following the ideas of Alfred Chandler in his American Railroads²¹ where he demonstrated that by virtue of being historically the first large scale commercial enterprises to be undertaken, railways called for the solution of unprecedented problems in engineering, recruitment, training and organisation of workers on a large scale, mobilisation of massive investment capital, as well as large scale alienation of land, and that the solution to all these problems marked a significant step in the growth of managerial knowledge, training and organisation for large-scale industry generally. Part of the aim here is to assess the limitations of "spill-off" effects from a technology developed and perfected in one part of the world and replanted wholesale into another.

The concept of "transfer of technology" is itself, to an extent, on trial. Moreover, in British West Africa where railways were owned and operated by the colonial governments, they occupied a central point in the formation of colonial policy. Consequently, a study of the organisation and mobilisation of resources for the railways will also elucidate the British Government's attitudes towards issues regarding public finance, labour and land tenure in the colonies. This is covered in chapters 5 to 9. Finally, Part III examines the effect of railway development on the Colonial economy of the Gold Coast. This is an attempt to evaluate the potential impact of new modes of transportation on economic activity in a part of the world which was previously seriously deficient in internal transport and communications.

The period covered in this thesis begins in 1879, when the first recorded proposals for railway construction were made, and ends in 1929, by which time the basic railway network and associated ports and harbours had been completed. 1929 was also the beginning of the Great Depression which introduces a new phase in the Colonial economy.

The reader will note that throughout the thesis the term "Gold Coast" is used flexibly to refer to the geographical area which has become present day Ghana. This has been done for two reasons. First, the railways themselves were at the time officially designated as "Gold Coast Railways". Second, the intent is to emphasise the fact that the railways were "Colonial" Railways.

Based on primary research from the Original Correspondence, Railways Departmental Reports, Blue Books, Government Gazettes and other official publications held at the Public Records Office and supplemented

by the relevant secondary literature, "Gold Coast Railways: The Making of a Colonial Economy" tells the story of the introduction and expansion of railways into the Gold Coast and its social and economic effects.

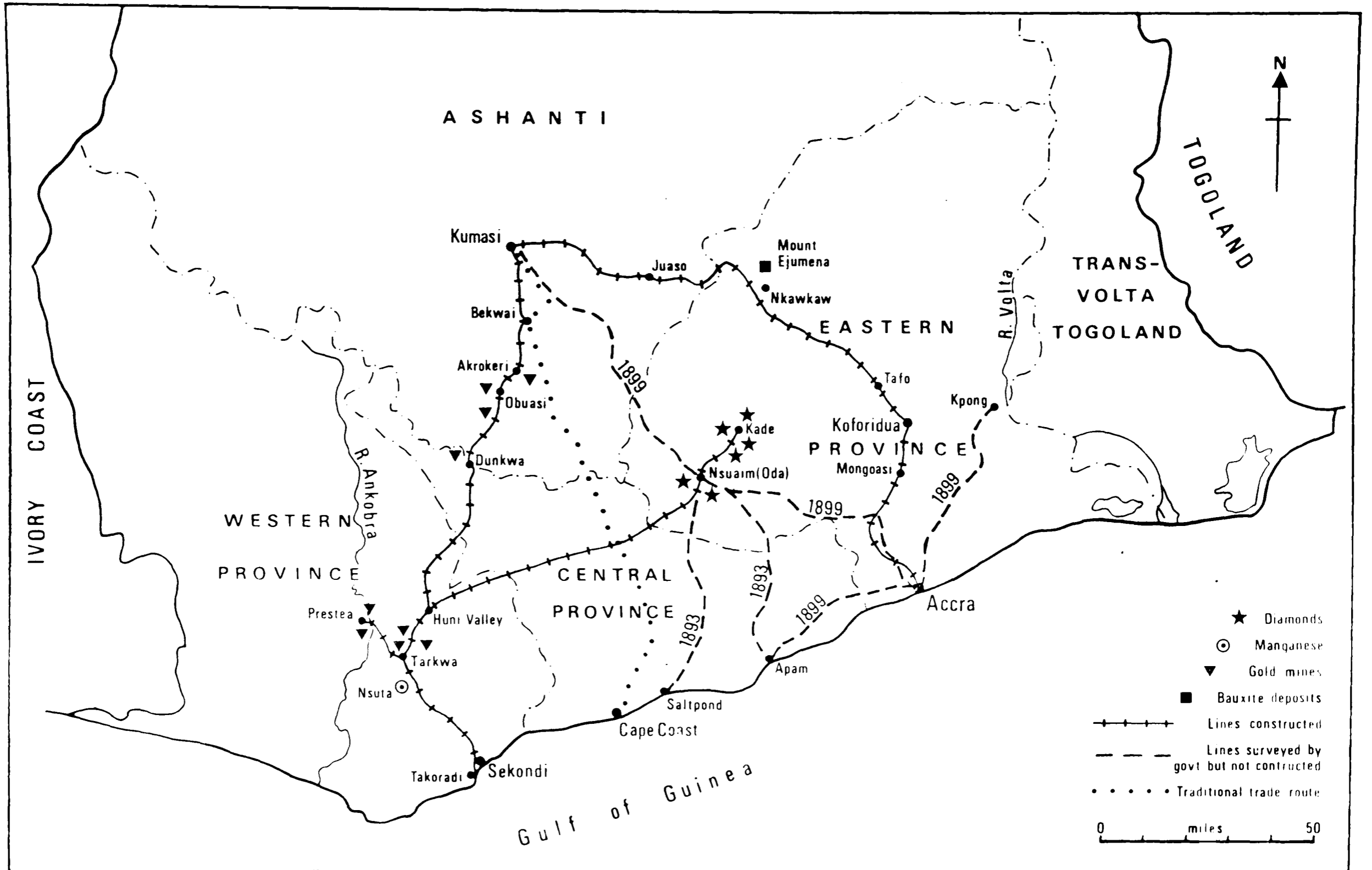
NOTES TO INTRODUCTION

1. See F.D. Lugard, The Dual Mandate in Tropical Africa (Edinburgh and London, 1922)5.
2. A. McPhee, The Economic Revolution in British West Africa (London, 1971), 278.
3. Such studies as have been conducted include S.E. Katzenellenbogen, Railways and the Copper Mines of Katanga, (London, 1973), A.M. O'Connor, Railways and Development in Uganda, (London, 1965), and Cosby, Cynthia A.M., "A History of the Nyasaland Railways, 1895-1935: A Study in Colonial Economic Development", Unpublished PhD thesis, (Syracuse University, 1974).
4. By far the most comprehensive single railway history is the work of the amateur historian, M.F. Hill, Permanent Way: The Story of the Kenya and Uganda Railways, 2 Volumes, (London, 1952).
5. A.G. Hopkins, An Economic History of West Africa, (London, 1973), 194.
6. See P.N. Davies, The Trade Makers, Elder Dempster in West Africa 1852-1972, (London, 1973) and "The Impact of the Expatriate Shipping Lines on the Economic Development of British West Africa", Business History, 19 (1977); also Charlotte Leubuscher, The West African Shipping Trade, 1909-1959, (Leyden, 1963).
7. See Patrick O'Brien (ed.), Railways and the Economic Development of Western Europe 1830-1914, (London, 1983); also P O'Brien, The New Economic History of the Railways (London, 1977).
8. Ibid.
9. McPhee, Economic Revolution; W.K. Hancock, Survey of British Commonwealth Affairs: Volume 11, Problems of Economic Policy, 1918-1939, (London, 1940).
10. P Duiguan and L.H. Gann, Colonialism in Africa: Volume 4, The Economics of Colonialism, (Cambridge, 1975).
11. Lugard, Dual Mandate, 5.
12. F.J. Pedler, Economic Geography of West Africa, (London, 1955). 114.
13. Karl Marx, Articles on India, (Bombay, 1943), 17-21.
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P A R T I

Map1 THE DEVELOPMENT OF THE GOLD COAST RAILWAY SYSTEM, 1893-1929.



CHAPTER 1

A SLOW BEGINNING, 1879-1895

Frankel's observation in 1938 that railways in Colonial Africa were essential for administrative and strategic purposes, and hence, by implication, that these objectives had priority, reflects a long-standing view.¹ Writing in 1924 about the railways in the British West African colonies Lilian Knowles argued that:

no impulse has been more potent in causing the railways to be built into the interior than the fact that the French were creating a railway net in their West African possessions which would, unless countered by British railway development, tap and absorb the trade of the British possessions.²

In the same year, Allan McPhee expressed similar views, albeit in more eulogistic language, about the Gold Coast railways. According to McPhee, the British lacked knowledge about the economic resources of the country because no comprehensive geological maps existed at the time and therefore all the Gold Coast railways were "mere economic speculations, being built for administrative, strategic, and philanthropic purposes."³ In recent times, scholars have adopted a more critical approach towards the Gold Coast railways which locates them within the developing economic needs of Colonialism. Writing in 1972, G.B. Kay argued that it was gold which originally attracted the British to the Gold Coast and therefore their first act of colonialism was to construct a railway in the Western districts to link the gold mines to the nearest port at Sekondi.⁴ Following this line of interpretation Rhoda Howard further argued that railway investment in the Gold Coast was geared towards the interests of the expatriate bourgeoisie so long as it did not conflict with the interests

of the colonial state itself, and that it was Africans who bore the brunt of such investments.⁵ However, a systematic study remains to be carried out as to how decisions were arrived at in relation to the selection of the three principal routes which formed the triangular railway system - a study which alone can lead to a better understanding of the role that the railways were intended to play in the colonial political economy. Such an understanding is also necessary if any meaningful evaluation of the actual impact of the railways on the Gold Coast economy is to be made. It is for these reasons that Part I of this thesis will concentrate on exploring the forces behind the formation of railway policy over the five decades before 1929.

The earliest phase in the history of the Gold Coast railway system was one of indecision and delay, resulting from a lack of official commitment to a railway policy. Discussion of possible railway construction began as early as 1879, but it was not until 1893 that the Colonial Office finally authorised railway surveys in the colony, as part of a general scheme for the whole of British West Africa. Before 1893 initiatives came mainly from private railway speculators who tried to convince the Colonial Office that railways could be built and operated successfully in the Gold Coast. This chapter examines the nature of these private railway schemes, the reasons why the Colonial Office turned them down, and the attempts of the Colonial Government itself to devise an appropriate railway strategy.

During the 1870's and 1880's, trade and communications between the coast and the interior depended almost entirely upon human portage over rough and poorly maintained roadways. There was some attempt by the

Colonial administration to clear existing trade routes and construct new roads on which officials could travel by hammock. Chiefs were granted annual stipends on condition that they mobilised communal labour for road clearance, with an additional allowance of £2 per mile being allowed for work carried out.⁶ But such improvements were conducted on a limited scale, and as late as 1889 it was reported that:

Except in the immediate vicinity in the largest coast towns, there were no roads in the country. The so-called roads are mere footpaths 12-18 inches broad, with the high bush on either side, tortuous, blocked with falling trunks, flooded with water in the rainy season, interrupted by bridgeless rivers...⁷

Such conditions placed serious constraints on trade. Head loading required considerable amounts of labour and its costs were relatively high. Over many years hammock men and carriers were paid 1/- per day plus 3d subsistence, and this had come to be the accepted market rate for all wage labour. It therefore cost about £10 to transport one ton of goods for 60 miles, and on this basis it was estimated that transport costs amounted to fifty per cent of the price paid to African producers of palm oil and rubber.⁸ When corporate mining activity commenced in the interior, transport problems were even more acute. Mining equipment had to be designed in such a way that it could be broken down into small units of not more than 50lbs., to be carried by one person. Such a procedure was slow, inefficient and unreliable, and it was not uncommon for porters to abandon their awkward loads in the bush.⁹

If the Gold Coast Colony's trade and production were to be increased, there was an obvious need for improved transport facilities.

Such requirements were heightened both by the growth in the volume of Gold Coast exports, particularly of rubber, during the last quarter of the nineteenth century and by the introduction of British mining capital into the western districts. The Ashanti War of 1873-74 gave fresh publicity to the existence of gold deposits in the Wassau and Tarkwa districts, and by 1878 two expatriate mining companies had commenced operations there. The first Gold Coast "jungle boom" was underway, and by 1882 no less than twelve companies were engaged in gold mining in the colony.¹⁰ However, the earliest initiatives for the introduction of railways into the Gold Coast appears to have come more from the mercantile community engaged in the Gold Coast's import-export trades than the mining companies struggling to establish themselves in the Western districts.

The first such proposal was put forward in 1879 when Fitzgerald, the editor of the African Times, and Mercer, former Director of Public Works in the Gold Coast, sought a government guarantee for a proposed company to build three railway lines - one from Accra to Kpong on the Volta to serve the eastern palm oil and cotton districts, another from Saltpond to serve the palm oil and rubber districts of the Central Province, and a third from Shama near Sekondi to the Wassau gold mines in the Western Province.¹¹ Failing a quick Colonial Office response, the two men got some influential merchants with West African connections, including two Members of Parliament, to sign a petition on the urgent need for the railways and with this they renewed their application.¹² Further proposals followed from Le Brun, a French merchant who was also Agent for the Netherlands Government in the Gold Coast, for a fifty mile line to link Elmina and Prahsu,¹³ and from F. Bary, a British railway

engineer, for a coastal line to link Accra with Elmina.¹⁴ Then, in May 1883, 48 expatriate merchants in the Colony banded together to float the idea of a forty mile line from Elmina to open up the central agricultural areas.¹⁵

Such proposals envisaged substantial government assistance as well as approval, but the reaction of both the Colonial government and the Colonial Office was one of extreme caution. There were three areas of official concern. First, all of the schemes sought a government guarantee of interest on the capital outlay. Railway construction by private companies supported by a government guarantee had been a common feature of transport innovation in the British Empire during the fifth decade of the nineteenth century, but by the 1870's the system was coming under attack. In India, for example, it had engendered widespread speculation and serious over-capitalisation, and substantial subsidies were being paid out of Indian revenues to British investors. Consequently, from 1869 the Government of India began to build its own railways, at a lower cost than under the guarantee system, and from 1879 it embarked on a policy of gradual, take-over of all lines.¹⁶ Against such a background, the Colonial Office was unhappy with the idea of introducing the guarantee system into the Gold Coast. "The days of guarantees are gone", one official noted in consideration of the Fitzgerald-Mercer proposal, although he was prepared to sanction a lower figure than the promoters had in mind.¹⁷

Second, the railway speculators were looking for free grants of land along the proposed routes, with rights to trade, to cultivate and to mine. In fact, the proposals could be seen as part of the mineral and

forestry concession scramble of the time which aimed at laying claims to vast territories for future speculation.¹⁸ The Colonial Office was worried about the political and social consequences of such large scale alienation of land in a colony where land remained under chiefs. The Colonial Office was therefore very careful to point out that technically it had no power to make land grants outside the immediate vicinity of the coastal forts and castles.¹⁹ When proposals included the idea of a northwards extension into Ashanti - as did one from Messrs Bircham & Company in 1887 - the officials were quick to point out that, because Ashanti was not under British jurisdiction, they "cannot grant the ordinary legal facilities for railway construction."²⁰

Finally, the Colonial Office suspected that the various promoters lacked sufficient backing from private capital to merit serious consideration. When for example, Fitzgerald and Mercer were asked to demonstrate their financial capabilities, their only response was to argue that so-called "responsible capitalists" would never be attracted to the colony without some lead from the government.²¹ Similarly, when the Colonial Office demanded evidence from Le Brun to show that his proposal was a "bona fide" one and that the requisite private capital would be forthcoming, nothing more was heard from him.²² The Colonial Office, aware of the dubious financial background of many such guarantee and concession hunters, laid down conditions to be fulfilled before detailed consideration of any application. Survey reports, estimates of potential traffic and information on the credit-worthiness of the applicants had to be supplied. These, the Secretary of State argued, would ensure that agreements would be reached with responsible people who were able to show that they could undertake the work and give security for its performance.²³

But while officials were prepared to consider private initiatives, opinion was coming round to the view that, given the highly speculative nature of the proposals coming before the Colonial Office, railway building in the Gold Coast, and indeed in British West Africa as a whole, should be seen as an activity more for the state itself than for private capital. Thus the Earl of Derby, commenting on the scheme of the 48 Gold Coast merchants, stated that if a private company could construct and operate railways profitably then the colonial government would be as well to do so *itself*, as direct revenue would accrue to the Treasury. Besides, the administrative and strategic needs of the Colonial state would be better served by a system of government ownership.²⁴

Such schemes threw the task of taking the initiative for railway construction onto the colonial government in Accra, which was very slow to perceive the advantages of a state railway programme. Governor Griffith, whose term in office lasted from 1883 to 1895, was particularly prone to see difficulties and problems in the way of railway development. His correspondence with the Colonial Office continuously stressed the absence of labour for large-scale construction projects, believing that such labour would have to be imported, and he pointed out the severe environmental barriers which would have to be overcome. Above all, he was concerned with the financial constraints on the colonial government. Commenting on one proposal for a line from Sekondi to Tarkwa in 1889 he stated:

The time has not yet arrived when this Government could undertake the construction of such a line or the provision of any such guarantees ... If ever the development of the country and the gold mines justified such a step which I hope may yet prove to be the case, the question can be considered in relation to

the state of the finances at the time.²⁵

Despite the apparent lack of interest, the railway issue never entirely disappeared from the official papers. The activities of rival colonial powers partly ensured this, for Britain's competitors in West Africa proved more active in the field of transport. Consequently, their trade began to penetrate areas which British merchants regarded as being within their sphere of influence. In German Togoland for instance, the Lome-Kpando-Kete Krachie road was by 1890 successfully competing with the Volta route for the trade of the Salaga and Kentampo markets in what was to become the Northern Territories of the Gold Coast.²⁶ The Togoland administration had also granted a concession to an organisation called the German Colonial Railway Construction and Operating Company in 1890: the company would receive a grant of land for which it would pay an annual rent and share profits with the government.²⁷ Similarly, in the Ivory Coast, the French construction of roads into the interior surpassed comparative British attempts in the Gold Coast. Consequently, British commercial interest groups began to perceive railway development as a means of protecting and expanding their activity in the region. Indeed this had become all the more urgent in view of the fact that the Brussels Conference of 1889-1890 had called on all the European powers to back up their claims to colonial territories in Africa by the establishment of effective administrations particularly through the construction of railways and roads.²⁸ Thus the London Chamber of Commerce made representations to the Colonial Office early in 1890 which stressed the need for both improved road communication and the construction of railways in order to establish their control over the interior territories as far as the Niger, the "natural boundary" of the Gold Coast.²⁹ The Manchester Chamber of Commerce later described the growing international

rivalry in more dramatic terms: "The French and Germans", the Chamber noted, "have established firm footholds on the coast, and are pushing inland with a tendency to converge in the North", and accordingly called for railways into the interior to prevent further pre-emption of British trade and commerce.³⁰

In the meantime, the rate of applications from private railway promoters to the Colonial Office was also speeding up, as a greater number of metropolitan businessmen and engineers continued to probe the possibility of developing railways in the colony. One such proposal was made early in 1890 when the Lartigue Railway Construction Company from Dublin sought government approval for the construction of an unspecified network of light railways in the colony.³¹ Other proposals followed from Gower Sadd of the African Concessions Trust (whose directors included the Earl of Mayo, R.A. Lawrence Kirk, John McCullum and H. Sherwin White) for a line from Cape Coast to Kumasi,³² and from Messrs James Irvine and Company of Liverpool, for a forty mile line from Sekondi to the Tarkwa mines.³³ Then in August 1891, two proposals were put forward, one from Messrs Edwards Bros. and Company of Liverpool who demanded a government subsidy for the construction of a line from Saltpond to serve the central agricultural districts,³⁴ and another from Mr Breakell, Director of Abosso Gold Mines in the Gold Coast who suggested a line from Sekondi to Tarkwa.³⁵ Finally applications were also received from Lord Gifford³⁶ and Henry Cooper³⁷ in November 1891 and January 1892 respectively, both of which sought government assistance for the construction of railways to open up the Central Province.

The result of such pressures was that from about 1890, official policy moved, albeit slowly, towards the formation of a more positive approach to the railway question. For instance early in 1890, the Colonial Office despatched questionnaires to the French and Portuguese Governments to obtain information regarding "the manner in which railways are worked in their African Colonies."³⁸ In the Gold Coast itself, a government appointed "Committee on Economic Agriculture" which included commercial interest groups and colonial officials had submitted its report in 1889 calling for the immediate construction of railways that would develop the "vegetable resources" of the country rather than mineral deposits.³⁹ Consequently, in 1890, the laying of a short line of about four and a half miles between Axim and the mouth of the Ankobra was seriously considered "to give an idea how a railway would fare in the colony."⁴⁰ Then in September 1891, a major step towards a full railway proposal came when Governor Griffith suggested a 300-400 mile network, the first phase of which was to form a trunk route from the most central port of the colony into the interior. Such a central line through the agricultural districts, the Governor argued, not only offered some hope of financial return, but in addition, it would form a suitable basis for future railway development.⁴¹ Clearly, Griffith's proposal was influenced by the recommendations of the Committee on Economic Agriculture.

Although the Gold Coast was by far the most popular colony for the British railway promoters, mainly because of its gold deposits, other British colonies were not entirely neglected. Indeed as Omosini points out, a significant number of the applicants for railway development in the Gold Coast also proposed simultaneous schemes for Lagos and Sierra Leone as well.⁴² Thus it was against such a background of mounting pressure

for railway construction throughout the British West African colonies that the Colonial Office authorised railway surveys in the Gold Coast as part of a general scheme for West Africa as a whole. Commenting on the proposals from Lord Gifford, Gower Sudd and Henry Cooper early in 1892 the Secretary of State, Lord Knutsford declared:

The colony has nothing to gain from the intervention of any of these applicants ... But while these particular proposals cannot be entertained, I think that the time has come when steps should be taken to decide upon the policy to be adopted by the Government with regards to the construction of railways.⁴³

The first question to be resolved, the Secretary of State argued, was whether railways would be constructed at all, and for this reason surveys would be carried out in the various colonies. Subsequently, he would decide whether private enterprise or public funds should be used to build the lines. Although the decision by no means implied a definite commitment towards railway construction, it nevertheless marked a significant step because, for the first time, the Colonial Office had agreed to commit colonial funds towards railway surveys on a large scale.

Even before Lord Knutsford's instructions were received in the Gold Coast, Governor Griffith had already recommended that Captain J.I. Lang of the Royal Engineers, who had had some experience in the colony, be seconded to undertake the work. In December, 1892 Captain Lang arrived in the colony and shortly afterwards informed Griffith that he considered Kormatine, two and a half miles west of Saltpond "an ideal landing place" and that the line would go to the agricultural districts of Insu'am (Oda). It is clear that this proposal followed the "central trunk route" strategy advocated by Governor Griffith. In fact the Governor informed the Colonial Office

with happy emphasis that :

the district selected for the railways is through the oil producing countries up to Nsuiam It is also geographically the most central town of the colony and on that account it is suitable as a converging point for branch railways to Ashanti on the one hand and Eastern Akim on the other hand.⁴⁴

The final report of Captain Lang's survey, which became available in October 1894, included two alternative routes - one from Kormatine near Saltpond to Nsuiam (Oda), a distance of 65 miles, which was estimated to cost £296,180.00 and another from Apam, 26 miles east of Saltpond, also to Nsuiam (Oda), a distance of 55 miles, which was estimated to cost £255,816.00. Lang stressed that both lines would pass through very fertile and thickly populated country and would therefore soon prove remunerative. This report was then referred to William Shelford, a Westminster railway consultant with wide experience in India and South East Asia, who had been appointed Consulting Engineer for all West African railway proposals. In March 1895, Shelford's recommendations were received in the Colonial Office and were notable for their highly optimistic views of the scheme. Shelford recommended the adoption of the Apam-Nsuiam (Oda) route as it entailed a shorter route and consequently a more modest capital cost. While critical of Lang for gross underestimation of cost, and revising the estimates for the 55 mile Apam-Nsuiam line at £331,044.00, Shelford was sure that the potential traffic would be at least 40,363 tons per annum. With an ideal rate of 4d per ton mile, the line would then be remunerative.⁴⁵

In spite of the glowing reports, the Colonial Office dragged its feet by deferring a decision on the Gold Coast proposal until all

the other West African surveys had been completed and the Consulting Engineer's reports on them submitted en masse. Sensing the continued lack of official commitment, the various West African commercial interest groups sent a powerful delegation to the Colonial Office in June 1895. The provision of railways, the delegation noted, would not only result in the expansion of British commerce in West Africa, but more importantly, it would create employment and stimulate British industry at a time of intensifying international competition.

They also argued that railways would counteract the French and German expansion in the region. However, if financial constraints rendered railway construction impossible throughout the whole of West Africa, they argued, then the Gold Coast would be a suitable starting point, because of its surplus revenue, population, palm oil and rubber resources, and above all its gold deposits. These proposals however were made to the Marquess of Ripon whose government had fallen the previous day.⁴⁶ They therefore fell on the desk of the new Colonial Secretary, Joseph Chamberlain.

CONCLUSION

From the 1870's onwards, and following the pattern of private railway construction in other parts of the world, railway promoters began to explore the possibilities of obtaining a Colonial Government guarantee to construct and operate railways in the Gold Coast. The aim was to provide a modern transport infrastructure that would meet the needs of the expanding British "imperial" and economic interests in the region.

However, the Colonial Office was opposed to guarantees because these were now seen as expensive and unreliable. Moreover, the applicants turned out to be men of questionable financial backgrounds whose only hope was to use both the prospects of government guarantee and land grants as security for raising capital. For these reasons, official policy began to favour a system of government ownership as it would also yield direct revenue to the Treasury as well as serving the administrative and military needs of the Colonial state more effectively.

Until 1890, there was no official commitment to any railway project for the colony. Thereafter, the balance started to shift, partly as a result of continued pressure from the railway speculators and other West African economic interest groups, and partly too as a result of the growing imperial rivalry in the region. The scramble for Colonial territory in West Africa, with its consequent pressures on Colonial governments to achieve effective administration on the ground and its threats to existing commercial relationships between the coastal parts and the interior, focussed the attention of British policy-makers more sharply than before on the transport and communications needs of the West African possessions. At the same time, the local administration in the Gold Coast proposed a central trunk route which would serve those districts from which came the principal agricultural exports, because this seemed most viable in financial terms and would provide a suitable foundation for further railway development. By 1893, railway surveys had commenced in all the West African Colonies and the following year a Consulting Engineer was appointed to advise on the proposed schemes. Nevertheless, the crucial decisions as to whether railways would be

constructed at all, and if so whether by private capital or by the colonial government, were to await the arrival of Joseph Chamberlain in the Colonial Office in July, 1895.

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CHAPTER 2

THE DEVELOPMENT OF THE WESTERN LINE, 1895-1912

In the previous chapter, it was noted that, although railway surveys had started in all the West African colonies in 1893 and in the following year a Consulting Engineer was appointed to advise on proposed schemes, the crucial decision as to whether railways would be constructed at all, and if so whether by private enterprise or by the Colonial Administrations, was to await the arrival of Joseph Chamberlain in the Colonial Office. This chapter focusses attention on three principal influences upon railway policy in the Gold Coast - Chamberlain and the notion of "tropical development", Governor Sir William Maxwell and his reference to a Malayan transportation model, and efforts by the various British West African interest groups to shape railway policy. From this the reasons for the construction of the "pioneer" railway line from Sekondi to Tarkwa, and its subsequent extension to Kumasi will be established.

CHAMBERLAIN AND THE DEVELOPMENT OF THE "TROPICAL ESTATES":

David Kimble's description of the year 1895 as the formative year for railway policy in West Africa¹ is perhaps more true of the Gold Coast than any of the other British colonies. At the metropolitan level, the year marked the appointment of Joseph Chamberlain as Secretary of State for the Colonies. Through his efforts the various West African railway proposals were transformed into reality. At the Colonial administrative level, 1895 also witnessed the appointment of Sir William

Maxwell to the Governorship of the Gold Coast. His economic policies, too, were to have a lasting impact on the Gold Coast railway programme.

A Birmingham metals industrialist turned politician, Chamberlain became the leading spokesman for "economic imperialism" among commercially minded British statesmen of his age.² He had always had a grand vision of empire building and regarded the entire British Colonial possessions as "one large estate" that was awaiting a systematic development. His political attitudes and philosophies particularly as regards the tropics, was largely the result of the international trade rivalry which the rise of Germany and America as industrial nations, (each with enormous resource bases, modern technology, concentrations of finance capital, aggressive overseas marketing practices) engendered for Britain's hitherto unrivalled supremacy in world trade.³ According to Chamberlain, if Britain was to withstand the imminent competition, then it was imperative that it gained control over new hinterland markets and sources of raw materials through the construction of railways. Inputs for railway construction in the Colonies, he argued, would stimulate investment and employment in British industry. These ideas were succinctly expressed to the House of Commons as early as 1893. Chamberlain argued:

I firmly believe that railways (in the Colonies) will be a good investment, and if you spend this money the working classes of the country and the people in the slums will benefit, for the whole of the work will be done in this country.⁴

As Secretary of State for the Colonies therefore, Chamberlain considered his major task to be the promotion of the economic development of the

"estates" and sought to convince private metropolitan entrepreneurs that responsibility lay with them as much as with the Government if that goal were to be achieved.

The new Secretary of State was convinced that government alone could provide the necessary infrastructure if private capital was to be attracted to the Colonies. Chamberlain argued:

Individual enterprise will till the fields and cut the timber, and work the mines; but Government and Government alone, can make roads and railways. This is the true Province of Government in new Countries. Until it is recognised by Great Britain, she will not have fulfilled her obligation to the Dependencies which she now holds under her rule.⁵

He was particularly optimistic about the Gold Coast because of its gold deposits, the exploitation of which he believed would stimulate other sectors of the economy.⁶

In October, 1895, the Consulting Engineers reports on the various railway surveys were received in the Colonial Office. Barely two weeks later, Chamberlain took the major decisions. First, the construction of the initial sections of the proposed railways in each colony should commence without further delay. Second, the Colonial Governments, rather than private enterprise should construct and own the lines. The standard Colonial guage of 3ft6 inches was approved except for the Sierra Leone railways which adopted the narrower guage of 2ft 6 inches. Third, the Departmental System of Construction would be adopted. By this system the governments would become their own contractors (as distinct from the contract system whereby the work would be entrusted to private contractors by tender). Under the Departmental System, the Crown Agents on the advice of the Consulting Engineers would appoint a Resident Engineer

who would be responsible for the actual construction of the project. Both the Resident Engineer and his construction staff would be public servants, answerable to the Colonial Government for administrative and disciplinary purposes. For technical matters however, the Resident Engineer would be responsible to the Consulting Engineers who would also advise the governments.

The Crown Agents were entrusted with the responsibility of organising and executing the United Kingdom side of the works, such as the purchase of materials, engagement of staff, financial administration etc. Perhaps more significantly, it was laid down that all stores and equipment, except those available locally, had to be procured from the United Kingdom. Finally, but in no way the least important, Chamberlain authorised the Crown Agents, to utilise the reserve funds of each of the Colonies to finance the preliminary stages of the construction.⁷ On receipt of these instructions in the Colonies, work began on the Lagos and Sierra Leone projects. The Colonial Office, however, instructed that construction should not commence in the Gold Coast until further surveys were carried out and the reports evaluated. It is an irony that the Gold Coast which received more attention than the other two colonies and where railway surveys were first started had to wait three more years before embarking on its pioneer line. And it is to the causes of this delay that we now turn.

GOVERNOR MAXWELL AND THE MALAYAN PARADIGM:

As we have observed in the previous chapter, the Griffith administration intended the proposed Apam-Nsuam (Oda) rail route to serve a dual purpose: on the one hand, it wished to promote

expatriate commercial and agrarian interests in the Central Province; on the other hand, its location was a suitable foundation for further railway development. In spite of the glowing reports upon the scheme however, it soon became evident that not only would the line not reach the construction stage, but more importantly, the original railway strategy was subject to drastic revision. The main reason for this was that early in 1895, Governor Griffith was relieved of his appointment as Governor. His replacement was Sir William Maxwell, with whose appointment economic policy in the Gold Coast made a volte face.

The Colonial Office appointed Maxwell with the principal task of carrying out the imperial policy of territorial expansion in the region by bringing Ashanti and the Northern regions under British Rule.⁸ But Governor Maxwell's economic policies for the existing Gold Coast Colony also had serious implications for railway policy. Before his arrival in the Gold Coast, Sir William Maxwell had served in various capacities in the Malay States, first as Straits Commissioner for Lands and subsequently as Resident. During this period he had worked to lay the basic foundation of the colonial political economy in the Settlements.⁹ The main preoccupation of the Malayan authorities was to create a favourable environment for private enterprise by providing ancilliary services such as railways and roads. In the Malay States, tin ore had been the principal attraction for the early colonial administrators who had by the early 1890's constructed short latitudinal lines from the Western half of the Peninsula to serve the tin mines. These lines linked the inland producing centres with the nearest coastal ports from whence the ore was shipped to either Penang or Singapore.¹⁰

When the new Governor arrived in the Gold Coast, he assumed that conditions there were similar to those in the Malay States and he sought to import policies as practiced in the Settlements into the Gold Coast. Given the contribution of tin mining to economic growth in the Malay States, Sir William Maxwell similarly favoured the promotion of gold mining in the Gold Coast as the means of attracting British capital. Thus his familiarisation tour of the country concentrated on the mining districts of the Western Province. He identified Wassaw, near Tarkwa as the centre of the mining industry, and emphasised the need to open up the district to British investors. Maxwell wrote:

I am very much impressed with the capabilities of the Wassaw District. It is well watered, the climate is good and the configuration of the hills, the character of the forest and the nature of the soil reminded me of the Malay Peninsula
 The richness of the auriferous deposits is remarkable and it is very desirable that this gold region should be better known, and by an equitable system of land and mining regulations, laid open to British and Colonial enterprise.¹¹

The main reason why government policy in the past had not favoured the mining companies Governor Maxwell argued, was the fact that concessions were acquired direct from chiefs and as a result no revenue accrued to the Colonial Treasury in the form of royalties. Nor did the mining companies pay any export tax on gold and timber (which was also produced in the same districts). This situation, which he called an anomaly, would be rectified forthwith through new legislation on land tenure which would require concessionnaires to pay royalties to Government. Consequently, Government would become duty bound to improve communications to the mines.¹²

Equally important was the Governor's suggestion that like the railway network of the Malay Peninsula, several light and short latitudinal lines should be constructed from the coast direct to link the centres of production in the interior. By this means, the Colony would avoid the necessity of building expensive trunk routes and the related large scale harbour works.¹³ Thus, addressing representatives from the Accra Chamber of Commerce who had called on him in May 1895 to express their concern about delay concerning the central railway proposal, the Governor declared that railways by themselves were meaningless unless considered in relation to port developments and other means of inland transportation such as rivers and roads. (He was particularly critical of the type of cart roads the Germans were building in Togoland). For this purpose, he went on, surveys would shortly be conducted on the coast to determine suitable sites for the development of lighterage ports. Similarly, the mouths and the rapids along the rivers Ankobra and Volta would be surveyed with the aim of improving them for the use of shipping traffic. These were to complement railways.¹⁴

In July 1895, Governor Maxwell submitted his comments on the report of the proposed central line to the Colonial Office. While conceding that, "the line traversed a rich palm-oil region and therefore the Government may accept and construct it", he nevertheless censured Captain Lang for placing too much emphasis on political advantages offered by its extension to Kumasi.¹⁵ Government policy, he went on, was to build a short line to serve the mines at Tarkwa as well, and therefore the proposed central route should form only one of several short lines to be constructed from the coast into the interior.

Captain Lang's scheme, he argued, was designed for "a much better and expensive line", and therefore incompatible with the light and cheap latitudinal railway system being advocated. As such, he argued that the entire report should be referred back to the Consulting Engineers to be reconsidered, adding that, "I hesitate to advocate the immediate construction of such a line."¹⁶

Next the local administration directed its efforts to giving publicity to the mineral potentials of the country with the aim of luring private investors. Between 1895 and 1898, official reports and public statements were full of sanguine, often exaggerated accounts of the Gold Coast's gold deposits. One such report stated that the Western Province alone had 13,000,000 tons of bucket reef from which no less than £40 million worth of gold could be extracted within ten years if the cyanide method of refining was adopted. The operation which would require over 1,350 stamps would involve an initial investment of £2 million and the area of land would permit 40 companies to work, each returning a monthly profit of £30,000.¹⁷ The presumption of the report was that railway communication would soon be established within the region.

The various railway lobbies were not slow in reacting to these new developments, exerting pressure on both the local administration and the Colonial Office in attempts to influence policy. Already in May, 1895, the mercantile community in Accra had sensed the shift in Government attitude towards the proposed central rail route when they expressed concern about "total neglect" in the formulation of policy and cautioned the new Governor to "examine and balance very well the

conflicting interests with regard to railways."¹⁸ Then in July of the same year, when the Engineer's report on the central route was eventually published, both the Accra and Manchester Chambers of Commerce called for its immediate construction, though they argued that Accra rather than Apam should become the coastal terminal on the grounds that as the administrative capital, Accra already had a large concentration of commercial activity with heavy fixed capital.¹⁹ Again in December 1895, the West African Trade Sections of the Manchester, Liverpool and London Chambers of Commerce reiterated their call for the construction of railways which would develop the "vegetable resources"²⁰ of the country rather than minerals.

In contrast to the merchants, the mining lobby was more restrained. Between 1895 and 1897, the main preoccupation of the mining companies was to reorganise their concerns and to secure Government validation for their concessions under impending legislation. It was not until 1897 that two of the mining companies urged the Colonial Office to construct the Gold Coast's first "pioneer" line in the Western Province to serve their mines. They argued that in addition to direct revenue to the Colonial Treasury through royalties, profits from gold mining would benefit the British investing public at large.²¹

In the meantime, the Colonial Office had authorised further railway and harbour surveys in the colony. In December 1896, the Consulting Engineers were asked to carry out two surveys - one from Sekondi-Takoradi on the coast to the mining districts of Parkwa, and another from Accra to Oda (Nsuiam).²² (The latter had become necessary in view of the mercantile demand for Accra rather than Apam to be

made the coastal terminal for an eastern-central rail route). At the same time, Messrs. Coode, Son and Mathews, a Westminster harbour construction firm, was engaged to examine the entire coast and to make recommendations as to the most suitable sites for the development of lighterage ports.²³

The reports on the proposed railways and harbour finally became available early in 1898. According to Shelford's report a line of 3 ft. 6 inches gauge from Sekondi on the coast to Tarkwa would be 40 miles in length and would cost £239,339. It stressed that because of the traffic for the mining industry, the line would prove profitable to operate. The result of the Accra-Nsuam (Oda) survey was less sanguine. It revealed that the line would be 77 miles in length and would cost £465,000 and that it would probably take some time for traffic to build up. As an alternative to the direct Accra-Nsuam (Oda) route, the report suggested that Captain Lang's original Apam-Nsuam (Oda) proposal could be adopted, in which case a short connecting coastal line would be built from Accra to Apam.²⁴ With regard to harbour facilities, Messrs. Coode Son and Mathews suggested the adoption of Sekondi, Apam and Accra as the main points of entry into the colony from where railway lines could be developed into the interior.²⁵ It is clear that this scheme followed the Malayan paradigm advocated by Governor Maxwell.

The weight of opinion created by both Maxwell and Shelford had its effect. The engineer's reports formed the subject of a Colonial Office Conference in July 1898, at which representatives of the west African commercial and mining lobbies were informed that the Sekondi-

Tarkwa line, the clearing of which had begun, was to be constructed first and that Sekondi rather than Takoradi would be the terminus. As soon as it was completed, two lines were to be constructed from Accra - the first one either direct to Oda(Nsuiam) or via Apam and the second one to Kpong on the Volta to serve commercial and agricultural interests.²⁶

CONSTRUCTION OF THE SEKONDI-TARKWA LINE:

The first task of the construction staff was to erect a wooden jetty at Sekondi for the landing of construction materials. Next they constructed staff quarters, workshops, running sheds and a turntable which transformed Sekondi, "a fishing village of few mud huts" into a base for the entire constructional workers.²⁷

However, actual construction of the line proceeded extremely slowly. There were several reasons for this. firstly, as a result of an engineering strike in Britain in 1897, orders for construction materials were not delivered until early 1899. Secondly, as a "pioneer" railway, the only means available for transporting materials and equipment inland was by head carriage which was extremely slow. In addition, the line traversed a very dense forest, which according to one observer, "rarely permits a view of more than fifty yards,"²⁸ and this had to be sufficiently cleared to prevent interruptions from falling trees. For instance, it was reported that it took 15 men six days to fell one particular tree and that several of such types were encountered.²⁹ Furthermore, the earthwork was of soft clay and consequently involved greater problems of drainage and ballasting. No suitable ballast material

was located in the area and consequently the staff had to manage with the labour intensive method whereby boulders were collected from the forest and then broken into pieces. Over 500,000 tons of these were required for the line.³⁰ Work was also handicapped by labour shortages. This was further complicated by the unsettled political climate in Ashanti. As a consequence of Ashanti's persistent resistance to Colonial rule, railway workers had to be drafted from time to time as carriers for the British invading forces. To the Africans, working on the railways became synonymous with military conscription. It was only by the deployment of armed constables on the project, ostensibly to guard against Ashanti attack, but in reality to prevent labourers from deserting, that construction continued.³¹ Ashanti was finally defeated in March, 1901 and four months later, the 40 mile Sekondi-Tarkwa line was completed.

THE TARKWA-KUMASI EXTENSION:

When the Colonial Office authorised the construction of the Sekondi-Tarkwa line in 1898, it did not intend that the line should subsequently be extended for an additional 128 miles to Kumasi, the heart of Ashanti. In fact, Acting Governor Hodgson had maintained in 1898 that for administrative and military convenience, a railway communication with Kumasi should necessarily start from Accra, the capital town.³² However, in 1900 when the Consulting Engineers were asked to consider the most suitable route to adopt for a railway to Ashanti, their report which became ready in July favoured the extension of the Sekondi-Tarkwa line to Kumasi.

The main reason for this is linked to the British annexation of Ashanti in 1895-6 and the resultant introduction of metropolitan mining capital into the region. The reasons for the British invasion of Ashanti in 1895-96 have been examined by Agbodeka.³³ According to him, traditional Gold Coast historiography, which locates the general expansion of British jurisdiction beyond the frontiers of the Gold Coast Colony within the context of the international colonial rivalry of the time,³⁴ has tended to obscure the fact that the 1895-96 invasion was a direct response to new Ashanti political and economic manoeuvres which aimed at permanently securing the independence of the Empire. Agbodeka argued that a series of border arrangements between the European powers in 1890 had already established Ashanti as a preserve for the British so that by the mid nineties there was hardly any trace of the earlier rivalries in the region. Hence, by implication, formal establishment of British rule over Ashanti was only a matter of time and the Colonial Office sought to accomplish this through diplomacy rather than military confrontation. On the other hand, at this time, not only did Ashanti embark on diplomacy by sending deputations to London to lobby Members of Parliament and other foreign consuls for international recognition of Ashanti as an independent state, but locally too, Kumasi's economic and military strategies were such that, "by 1895 there was a feeling that if Britain did not act quickly, Ashanti would permanently shut them off from the interior."³⁵

Be that as it may, it is clear that by 1895, Britain had committed itself to the conquest of Ashanti. While the War Office made the necessary preparations for war, Governor Maxwell delivered an

ultimatum to Kumasi to "accept" a British Resident who would have power to hold courts, organise a Police Force and protect British commercial interests in the region.³⁶ Failing an Ashanti response, by December 1895, Kumasi was sacked and the King, Prempeh I, the Queen Mother, Yaa Akyaa and most of the leading divisional chiefs at the court were arrested and exiled first to Sierra Leone and subsequently to the Seychelles.³⁷

The conquest of Ashanti paved the way for the penetration of British mining capital into the region. This process had begun in 1892 when three African concession mongers, J.P. Brown, J.E. Biney, and J. Ellis had approached a certain C.A. Cade, a British merchant stationed at Cape Coast with an offer to sell him a 99 year lease over the Obuasi gold mines³⁸ which they themselves had been working since 1890.³⁹ However, due to the unsettled situation in Ashanti, Cade could not respond actively to the offer until 1895. In that year, he formed the Cote d'Or Company Limited and with the assistance of Biney and his friends, Cade acquired the property from Nana Kweku Osai of Bekwai for £200.⁴⁰ But for the next two years Cade's efforts to monopolise funds for the company succeeded in raising no more than £4,000 and his demand for Colonial Office recognition for his concession was simply ignored.⁴¹ Consequently, in April 1897, Cade decided to sell his booty to a certain Fred Gordon, a London hotelier and Chairman of the Gordon Hotels Company, who together with a group of British businessmen including four Members of Parliament floated a new company, Ashanti Goldfields Corporation with a nominal capital of £250,000 as successors of Cote d'Or.⁴² Cade himself became a shareholder in the new company. A Crown Agent's enquiry into the background of the Corporation revealed the shareholders

to be "very wealthy and influential members of the financial community" and Mr Gordon in particular had had personal success in business.⁴³ Thus, with the financial credibility of the new company so established, the Colonial Office now agreed, and on 3 June 1897, the Crown Agents entered into an agreement with the Ashanti Goldfields Corporation on behalf of the Gold Coast Government. This involved a one hundred square mile concession with monopoly rights to mine, cut timber and trade in Ashanti in return for a 5 per cent royalty.⁴⁴ By October 1897, Ashanti Goldfields had commenced mining at Obuasi.

The first step towards the establishment of railway communication with Ashanti, came in August 1898 when Fred Gordon, Chairman of Ashanti Goldfields approached the Colonial Office with the proposal that the Sekondi-Tarkwa railway scheme should be transformed into a major trunk route so as to serve their property at Obuasi and offered to pay up to £5,000 towards the cost of the survey.⁴⁵ The Colonial Office however turned down the offer because "no assurance can be given for the line."⁴⁶ The following year, Gordon renewed his request for the extension of the Tarkwa railway to Obuasi with a new offer to guarantee traffic on the line to cover capital charges for ten years.⁴⁷ In the meantime, the Colonial authorities themselves were beginning to feel an urgent need for a railway communication to Ashanti. Although Kumasi had been occupied and the King exiled since 1896, the establishment of British rule in the region was far from complete. The period 1896-1900 was one of "war fever" as troops loyal to Prempeh reorganised in the bush.⁴⁸ Indeed, by March 1900, when Acting Governor Hodgson delivered his message that Prempeh was exiled and seized the Golden Stool, another full scale war resulted. Under the circumstances, the Colonial Office considered the immediate

construction of railways into Ashanti to be imperative if the persistent resistance were to be crushed.⁴⁹ However, by this time, it had also become evident that Chamberlain's hopes of obtaining substantial imperial financial assistance for the West African railway projects had failed. Consequently, the Colonial Office began to take the Ashanti Goldfield's offer more seriously since it would "relieve the Government of a very large proportion of the risk of construction."⁵⁰ At this point the financial interest of mining capital and the strategic interest of the colonial administration converged upon each other.

By this time, it had become clear that the Malayan paradigm was being abandoned. A series of negotiations between the Crown Agents and Ashanti Goldfields Corporation culminated in a contract early in 1901. The Government undertook to extend the line from Tarkwa to Kumasi. In return, Ashanti Goldfields and its subsidiary, Ashanti Consuls, agreed to meet any losses on the railway, for 20 years from the date the line reached Kumasi. It would meet losses of up to £30,000 representing capital charges on the estimated £1 million cost of the extension. If the net receipts in any particular year exceeded 4½ per cent on the capital outlay, the company would be entitled to one-fifth of such profits. Ashanti Goldfields would be a party to all railway tariffs though the administration reserved the right to convey troops and stores on the railways at "cost of conveyance."⁵¹ Clearly, the arrangement marked a new phase in the role of private capital in colonial railway development. Rather than complete government financing of railway construction, a private company was now providing security for the line.

The extension to Kumasi was authorised at a time when the uncertainties created in the South African gold mines as a result of the Anglo-Boer War, together with high world market prices for gold had led to a temporary gold boom in the Gold Coast - when more than 400 companies were floated in London for mineral exploration in the country.⁵² Consequently, the mining lobby was more influential now than it had been a few years earlier. Companies whose properties lay beyond Tarkwa lobbied for a route for the proposed extension which would serve their mines. On the other hand, Ashanti Goldfields Corporation wanted the line constructed direct to its property without reference to the demands of the other mines. In the end, the Colonial Office ruled that the extension should as far as possible place all promising mines on the railway route. Eventually, the Engineers adopted a route which served the properties of Wassau, Abosso, Cinnamon Bippo and various other mining companies.⁵³

The extension which started in June 1901, had by December 1902, reached Obuassi, 86 miles beyond Tarkwa and the permanent way was far advanced towards Kumasi. By March 1904, the erection of permanent bridges and ballasting were finished, thus affording a direct railway link between Sekondi on the coast and Kumasi, the heart of Ashanti. In all, there were 19 stations on the line the majority of which had military fortifications for obvious strategic reasons.⁵⁴

The total cost of the entire 168 mile route in 1904 stood at £1,756,031 out of which £366,501 was the cost of the Sekondi-Tarkwa section (40 miles). The remaining £1,389,530 was the cost of the Tarkwa-Kumasi extension (128 miles), a figure that exceeded the original

estimate of £824,460 by more than half a million pounds. Construction costs were higher in the Gold Coast than in the other West African colonies - an average of £10,453 per mile compared with Nigeria's £7,064 and the Sierra Leonean narrow gauge which cost a mere £4,316 per mile to build.⁵⁵ Despite the high construction costs, it was evident that the Sekondi-Kumasi line contained very serious engineering defects including abnormally steep grades as well as very sharp curves. Besides this the drainage was faulty and the ballasting insufficient.⁵⁶ Not surprisingly, the role and influence of the Ashanti Goldfields Corporation in collaborating with the Consulting Engineers over the planning and executing of the Kumasi railway extension, and indeed the suitability of the departmental system of railway construction, came to be questioned. This was particularly the case after a financial scandal involving Ashanti Goldfields and the Engineers came to light. Given the advantages of an early rail link to Obuassi, the Corporation had undertaken to pay £1,000 to the Engineers for each month that the line was completed ahead of schedule to their property at Obuasi. As it turned out the line was completed to Obuassi six months ahead of schedule.⁵⁷

THE KUMASI RAILWAY AND ASHANTI POLITICS:

After five years of uncertainties concerning funding for the West African railways, problems associated with pioneer projects and persistent Ashanti resistance to Colonial rule, a railway communication was established between Sekondi and Kumasi. The completion of this "pioneer" line marked a very significant step in the political history of the country. This was fully demonstrated by the grand "celebration"

which accompanied the arrival of the first train in Kumasi. An eye witness account stated:

The first train was to arrive at Kumasi on October 1st 1903. It was due at about 11 o'clock, and was to be driven by Mrs Hurst, the wife of the Chief Engineer. Sir Donald Stewart, the Chief Commissioner invited all the chiefs to come in for the opening. I never saw such a collection of chiefs the whole time I was out on the coast. They all had their full show of gold ornaments, and their best umbrellas. There were thousands there. A lot of fog signals had been laid on the rails and the chiefs had been served out with gunpowder to fire off.⁵⁸

Clearly, the celebration not only symbolised the triumph of British Imperialism over Ashanti's determination to preserve its autonomy, but more importantly, it represented the ascendancy of the collaborationist elements within Ashanti politics. Following Sir Garnet Wolsely's military expedition against Kumasi in 1874 and the resultant civil war in Ashanti, British policy had aimed at encouraging secessionist divisional chiefs.⁵⁹ Although by the 1890's Kumasi had virtually restored unity within its Empire, the British influence had already left a permanent mark. Thus in 1895, Bekwai, one of the powerful Ashanti divisions defected to the British side and allowed Europeans (Cade) access to the rich Obuasi gold mines.⁶⁰ Not surprisingly, during the final outbreak of resistance in 1900, Bekwai fought side by side with the British troops whilst some other divisions remained neutral.⁶¹ With King Prempeh and 56 leading Ashanti chiefs and families in exile, the Golden Stool seized and taken to London, the railway which was originally intended to carry British troops to Kumasi, was instead used early in 1904 to organise an excursion for the collaborationist Ashanti leaders to Sekondi, so as to demonstrate to them "the true benefits of adapting themselves to the new mode of transportation."⁶²

THE MINING COMPANIES AND CONSTRUCTION OF BRANCH LINES:

Following the Ashanti Goldfields agreement, the Colonial Office introduced guidelines which were designed to encourage partnership between Government and private enterprise in railway building as "it is not likely government can undertake all by itself and private capital might come in."⁶³ Under the terms any party interested in a line could approach the Government and deposit the required sum for the survey though the administration would have the right to determine how the line was to be constructed.

It was in line with this policy that Broomasi Mines Limited circulated a letter early in 1903 calling for support for the construction of a branch line from Tarkwa to Prestea.⁶⁴ In April, Mr Percy Tarbutt took up the matter with the Colonial Office which included a proposal to advance a sum of £150,000 being the estimated cost of construction to the Colonial Government at 3 per cent interest to be repaid within two years. However, the Colonial Office dragged its feet, and following Tarbutt's death the negotiations fell through.⁶⁵

The scheme was not revived until 1906, when Mr Edward Davies of the Fanti Consolidated Mines Limited approached the Crown Agents with a similar proposal. The new estimate for the 18 mile branch line was £120,000 and the mine-owners offered to provide £100,000 towards the construction cost. The gauge and equipment would be the same as that of the existing Sekondi-Kumasi line so as to ensure uniformity. The Fanti Consolidated Mines would also guarantee traffic up to £600, being the annual capital charges.⁶⁶ The Colonial Office agreed and in 1908, the Consulting Engineers were authorised to undertake the project

departmentally. The work was completed in January 1911 and the 18 mile Tarkwa-Prestea line opened to public traffic. In addition to the Prestea branch line, the mine-owners themselves constructed private sidings and tramways from the Sekondi-Kumasi main line to their properties for the convergance of wood fuel, timber and general stores.⁶⁷

CONCLUSION:

1895 marked a turning point in the history of the West African railways, for in that year Joseph Chamberlain, a strong believer in "economic imperialism", was appointed Secretary of State for the Colonies. Through his efforts the various railway proposals were translated into reality. For the Gold Coast in particular 1895 was also significant in that in that year, Sir William Maxwell was appointed Governor and given the clear objective of bringing Ashanti and the Northern regions under British colonial rule. But Maxwell's economic policies for the existing Gold Coast colony also had far reaching consequences for railway development. Despite the advantages of an integrated railway system and promising financial return on the proposed Apam-Nsuaim (Oda) railway in particular, the Griffith-Lang strategy was abandoned in favour of a Malayan model of railway development put forward by Maxwell, formerly a long serving official in the Straits Settlements. Influenced by the contribution of tin mining to economic growth in Malaya, Maxwell favoured the promotion of gold mining in the Gold Coast as a means of attracting metropolitan capital. Moreover, given the initial heavy capital requirements for an integrated railway system and its consequent need for developing the coastal terminal into a focal point of entry by constructing large scale port facilities,

Sir William favoured the building of light and short latitudinal lines from the coast to tap specific centres of production in the hinterland. Although such inexpensive "target" railways would ensure efficient exploitation of resources without much initial capital outlay, its implication for areas that lacked mineral deposits such as the northern regions are far reaching: the doors of transport innovation would be closed to them for a long time.

As far as the western railway was concerned, both Kay and Howard are correct in their assessment (see Ch One, p. 10-11) that the railway was built primarily to serve the interest of expatriate mining capital. Indigenous and expatriate trading and agrarian needs were afforded a lower priority. However, Kay and Howard fail to give enough weight to the strategic interests of the Colonial Government in building the line from Tarkwa to Kumasi, and the implication of this extension for Ashanti politics needs to be brought out more clearly. The introduction of railway communication with Kumasi symbolised the advent of formal British Colonial rule over a major part of what was to become present day Ghana.

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27. G.B., P.P., Railways in Sierra Leone, Lagos and Gold Coast, 8.
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30. Ibid., 14.
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33. F. Agbodeka, African Politics and British Policy in the Gold Coast 1868 - 1900, (London, 1971.), 147 - 155.
34. See for instance, W.E.F. Ward, A History of Ghana, (London, 1965), 315.
35. Agbodeka, African Politics, 152.
36. G.B., P.P., Affairs in Ashanti, (C. 7918) 1896.
37. Ibid.
38. W.R. Feldtman, "The Ashanti Goldfields Corporation", The Mining Magazine, May 1916, 257 - 268.
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52. Ibid., 8.
53. Ibid.
54. Resident Engineer to Crown Agents, Fortification of Stations in Ashanti, 21 April 1902, P.R.O: C.O. 96/400
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56. Governor Rodger to Secretary of State, Criticisms of Sekondi-Kumasi railway, 28 January 1905, P.R.O: C.O. 96/651.
57. Ibid.
58. Extract from Captain A.W. Morris' Private Diary, quoted in Director of Public Works, Gold Coast Railways, with information about the country, (Accra, 1925), 7.

59. A. Agbodeka, African Politics, 166 - 168.
60. Indeed when news of the Cade concession got to the Asantehene in 1895, he ordered the Bekwaihene to turn out the "stranger" to which Nana Osai replied that he could not do so because the whiteman had paid a debt of £200 on his behalf. (See Maxwell to Chamberlain, 22 October 1895, C.O. Print, Africa No. 513).
61. A. Agbodeka, African Politics, 172.
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CHAPTER 3

THE EASTERN LINE AND THE DEVELOPMENT OF
LIGHTERAGE PORTS, 1904-1918

Hardly had the Sekondi-Kumasi line been completed when discussion commenced on the construction of additional rail routes. Given Chamberlain's promise to serve mercantile needs on the completion of the western line, it was presumed that an eastern line would follow. The Colonial Administration's immediate concern, however, was to reorganise its finances, so as to convince both the Imperial Treasury and the British investing public that it could repay any future loans. Eventually, in 1908 the Colony succeeded in raising a loan of £1,030,000 and in 1909 a 40 mile eastern line was commenced from Accra to Mangoase. This line was extended by an additional 25 miles to Tafo by 1916, when all railway projects were suspended as a result of war time restrictions. In addition to the railways, lighterage ports were built at Sekondi and Accra.

This chapter carries the discussion forward by examining how decisions were arrived at as to the location of the eastern rail routes and the construction of the Accra and Sekondi lighterage ports.

SIR JOHN RODGER AND THE RE-ARTICULATION OF THE MALAYAN PARADIGM:

In 1898, when Messrs Coode, Son and Mathews published their report on Gold Coast harbours, the Colonial Administration was particularly attracted to the part that dealt with the railway line from Accra to

Kpong on the Volta. Such a line, it was argued, would tap the oil palm producing areas of Krobo and Eastern Akwapim, as well as stimulating cotton cultivation in the semi-arid Volta districts. Additionally, it would facilitate the movement of government stores via the Volta to the Northern Territories, and would bring the Government Sanatorium and Botanical Station at Aburi, 1400 feet above sea level, within easy access from Accra so that "Europeans will be able to reside in this delightful spot, coming daily to their offices in Accra."¹

Consequently, the Government authorised Shelford, the Consulting Engineer to carry out a survey of the proposed route. Their report which was ready in 1899, stated that the line would be 55 miles in length and would cost £5,600 per mile (far below the average cost of West African Railways). The gradients would not exceed 1:50, the earthworks would be light, and there were no major rivers to cross. Perhaps the most attractive aspect of the report was the fact that the line was to pass through one of the most densely populated areas of the country, having an average population density of 1423 persons per square mile.²

Given the commercial and administrative advantages of the proposed railway line to Kpong, the Governor, Sir Mathew Nathan, obtained the Secretary of State's approval in 1902 for its construction, which was expected to start as soon as the western line had been completed to Kumasi.³ Indeed as late as 1905 when other competing routes had been proposed for the eastern parts of the country, the Consulting Engineers still held the Kpong line to be one that would pay its way without difficulty, adding that, "this scheme has therefore always appeared to us to be promising."⁴

By that time, however, there had been a shift in government attitudes towards the proposed Accra-Kpong line. The main reason for this was that in 1904, Sir Mathew Nathan retired as Governor of the Colony. His replacement was Sir John Rodger, with whose appointment the Malayan transportation paradigm was forcefully re-articulated for the Gold Coast. Rodger, like William Maxwell before him, had served for several years in the Straits Settlements prior to his arrival in West Africa. Not surprisingly, he was in favour of building short latitudinal lines from the coast into the interior as well as improving the waterways for heavy shipping. Rodger stated:

When dealing with the general question of transport in this Colony, we should, in my opinion consider the sea the main line of communication and endeavour to connect our coast towns with the various planting and mining districts at as many points as possible by means of rivers, roads and railways.⁵

Consequently, the new Governor called for the abandonment of the Accra-Kpong proposal, since the Volta river route, though ineffective, would continue somehow to serve the eastern borders of the country. He suggested that the proposed line should be re-routed in a more northerly direction, from Accra to Mangoase, which he had identified as "the centre of the cocoa industry." Besides tapping new country, this scheme would avoid competition with the Volta.

This position was strongly supported by Mr Muir, agent for Messrs F.W. Swanzy and Company, who was also the mercantile representative on the Legislative Council. Mercantile interests were largely centred around the prospects of trade afforded by the nascent cocoa industry in the districts to the west of Akwapim, and accordingly wished to shift the centre of commercial activity from the Dodowa-Kpong districts to the

emergent productive areas west of the Aburi hills.⁶ It must be stated however, that Muir's support for the re-routing of the Kpong line could not have been entirely without ulterior motives. Given that F.W. Swanzy owned trading stores including cotton ginneries at the river ports of Akuse and Kpong as well as operating a boat service on the Volta, Mr Muir was likely to oppose any scheme which aimed at diverting the Volta river traffic from its natural outlet at Ada. Indeed, already in 1902, he had protested to Sir Mathew Nathan against the construction of the Kpong line precisely for the same reasons, though without success.⁷

As well as mercantile pressures, a degree of mining interest also influenced the selection of the Accra-Mangoase route over the Accra-Kpong line. For instance, although the Consulting Engineers conceded that the Kpong line had enormous advantages over the Mangoase line in terms of population and engineering ease, they favoured the Accra-Mangoase route on the grounds that it might prove possible to extend it to, "the Eastern Akim Goldfields, which had hitherto proved unworkable for want of transport."⁸

Finally, like the original Accra-Kpong proposal in 1898, issues of social and administrative convenience continued to influence the selection of the Accra-Mangoase route. The Accra Chamber of Commerce envisaged a possible extension of the line through Begoro to the Presbyterian Mission Station at Abetifi in order to provide a holiday resort for Europeans.⁹ A similar sentiment was also expressed at the Government Secretariat when one official argued that:

If this railway is to be made, there is no use in stopping at Mangoase, it should go not to Kortoridua, but to the bend of the Densu, where the Kentenke falls ... there is a beautiful site

here for European township, and I think it would be found that the power obtainable from this falls might be put to great use in connection with the railways.¹⁰

In short, given that a railway line from Accra to Mangoase was as capable of serving the administrative and social needs of the expatriate community as much as a line from Accra to Kpong, together with serving the emergent cocoa productive districts and the gold mines of Akyem more effectively, it was not surprising that Sir John Rodger's revival of the Malayan railway development paradigm met the unanimous approval of the Gold Coast railway interests.

THE CONSTRUCTION OF THE ACCRA MANGOASE LINE AND THE MURPHY CONTRACT.

In November, 1905, a team of surveyors was despatched by the Crown Agents to the Gold Coast with instructions to conduct a survey for the proposed rail route from Accra to Mangoase. It was not until August 1907 that the party reported to the Colonial Office. It stated that the line would be forty miles long and would cost £250,000 or £6,250 per mile to construct. The report also expected that cocoa, palm oil and timber would constitute the bulk of the traffic.¹¹

But a decision to invite tenders for the construction of the Accra - Mangoase line, made that forty mile stretch of line an exception to the departmental system of construction previously used in building railways in the Gold Coast, and indeed throughout British West Africa. As a consequence of disquiet over the high costs, as well as constructional deficiencies, in the "pioneer" western line, particularly the belief that allegations of financial malpractices against the Resident Engineer together with problems of administrative control under the departmental system were partly to blame for such deficiencies, members of the West

African commercial lobby began to argue for the adoption of the conventional contract method of construction for future railway development. As early as March, 1905 the Joint West African Consultative Committee advocated the "trial" of the contract system when they argued that the departmental system had proved unsuccessful mainly in terms of cost.¹² A similar sentiment was expressed from the Colony when the Governor warned the Colonial Office about local opinion on the matter. Sir John Rodger wrote:

When the question of providing funds for constructing the Accra railway comes before the Legislative Council for consideration, I do not anticipate any opposition to the proposal; but I have little doubt, from what I know of local opinion, that the construction of a new line on the same system as that adopted in constructing the railway from Sekondi to Kumasi will be strenuously opposed by the unofficial members of the council.¹³

Rodger himself was in favour of the departmental system. He believed that the engagement of inexperienced engineers and lack of local knowledge rather than issues of administrative control, were to blame for shoddy construction on the western line. He argued that like the Government Railways in Malaya, the Gold Coast Railways Department should maintain a permanent construction staff (who would also be responsible for the maintenance of the open lines) so as to guard against the employment of temporary construction engineers who were "neither concerned about economy nor real completion of the work."¹⁴

Nevertheless, when the Loans Ordinance was later introduced in the Legislative Council, and the unofficial members unanimously voted against the second reading in opposition to the departmental system, both the Colonial Office and the local administration agreed to give

the contract system a trial. Consequently, in August 1907, the Colonial Office authorised the Crown Agents to invite tenders for the construction of the Accra-Mangoase railway. At the close of tender period, only three applications were received, out of which the one from Mr Murphy, a Civil Engineer in Dublin was the only one that was considered "worthy of consideration."¹⁵ The West African Section of the London Chamber of Commerce criticised the Crown Agents for their failure to give sufficient publicity to the call for tender.¹⁶ Nevertheless, the Agents went ahead to award the contract to Mr Murphy on 18 January, 1909. The total amount of the contract was £165,614 excluding the cost of permanent way and other specified materials which were to be supplied by the Colonial Government. The contract also included the maintenance of the line for a period of one year from the date of completion.¹⁷

Early in 1909, Murphy commenced the construction of the Accra-Mangoase line. By the end of 1909, earthworks had been completed to Mangoase. Ballasting had also been finished to mile 36, and all bridges and culverts were nearing completion. Similarly, the main stations at Accra, Dome, Amasema and Nsawan were nearing completion. By early 1910, the first locomotives and rolling stock (including 4 tank engines, 8 passenger cars, 20 steel wagons and 10 low-sided steel trucks) had been brought in, and the line unofficially opened to public traffic.¹⁸

It was not long, however, before questions began to be asked as to the success of Murphy's achievement. His engineering expertise was severely tested during the rainy seasons of 1910 and 1911, when no less than three-quarters of the entire line came under flood. The

place most severely affected was the five-mile stretch through Achimota forest, 10 miles from Accra.¹⁹ In fact, the situation was so bad that the Colonial Office appointed an independent Inspection Engineer to examine the line and to make recommendations. This report which became ready in 1911 censured the contractors for their shoddy work, particularly their desire to minimise labour costs by avoiding earthworks. Recommendations included re-routing in order to cut out the sections of the line that lay in river beds, construction of additional bridges with much heavier concrete foundations as well as re-ballasting the entire line. These works were to be carried out by Murphy for an additional sum of £57,000 or 30 per cent of the original contract.²⁰ Despite the adverse report, Mr Murphy was never made liable for the constructional deficiency. The work was finally completed in July, 1912.

Once again, the problem had arisen as to the most suitable method to be adopted for railway construction in the colony. But the very nature of colonial policy, authorising railway projects on a piecemeal basis, only when justified by the finances of the colony, made the reversion to the departmental system necessary. This policy would result in the construction of the entire 192 mile Accra - Kumasi line in a telescopic fashion, involving as many as five different railheads.

THE MANGOASE - KOFORIDUA - TAFO EXTENSIONS:

Hardly had the construction of the Accra-Mangoase railway began, than both the Colonial authorities and the mercantile community realised that any "eastern line" which fell short of the Koforidua and

and Begoro districts would be failing to fulfil its original aim, namely the promotion of palm oil, rubber and cocoa cultivation in the region.²¹ This had become all the more urgent in view of the fact that farmers on the Krobo "plantations" near Begoro were reported to have started stockpiling their produce, especially palm kernels and cocoa in anticipation of the arrival of railways.²² Consequently, Sir John Rodger, an advocate of short latitudinal lines, was prepared to support the extension of the Accra - Mangoase line. Already in 1910, Rodger had suggested that Murphy's contract should be extended to include a thirteen mile extension from Mangoase to Koforidua, though the suggestion was not immediately acted upon because of the constructional problems in which the Murphy contract had run into.²³

The Colonial Office authorised this extension only in 1912. Construction commenced early in 1913, when Mr Lower, a permanent constructional engineer, was transferred from the Tarkwa - Prestea branch line to undertake the work departmentally. By January, 1915, the extension had been completed.²⁴

The nature of the transport demand created by the cocoa industry became clearer when one considers that in 1915, the year the railways reached Koforidua, no less than 41,000 tons of the beans were railed to Accra, out of which 16,000 was loaded from the Koforidua station alone.²⁵ It was therefore not surprising that even before the Koforidua extension had been completed, a further twelve mile extension had been authorised from Koforidua to Tafo, another principal cocoa growing town. This extension was to be undertaken by E.W. Cozens-Hardy, a Maintenance Engineer on the open lines.²⁶

However, hardly had construction started than the First World War broke out and the British Ministry of Munitions suspended the use of heavy metals in the civilian sector, especially for the railway projects. Indeed, when the Gold Coast annual budget for 1916 made provision for the purchase of railway materials for the completion of the Tafo extension, it caused an uproar in the British press, as a result of which the Minister of Munitions warned the Colonial Office that, "I am to emphasise the extreme importance at the present time, that every effort to be made to diminish consumption for railway purposes."²⁷ It was only after a protracted negotiation between the Ministry of Munitions and the Colonial Office that the Crown Agents were permitted to make purchases for the completion of the Tafo extension.

Construction resumed early in 1917 when materials were eventually delivered. By May, Jumapo station, seven miles from Koforidua was opened to public traffic. This was closely followed by the opening of Tafo station in July, thus bringing the length of the Accra line to a total of 65 miles.²⁸ Railway projects now came to a halt until the end of the War.

THE MOUNT EJUMENA BAUXITE DEPOSITS AND THE PROPOSED TAFO-KUMASI

EXTENSION:

Despite the suspension of railway projects, it was not long before attention began to focus on the possibility of developing the eastern railway into another major trunk route into the interior, linking up with the western line in Ashanti. Administrative requirements

favoured such an extension of the Accra line. For instance, in 1913, the General Manager of the Railways suggested that the two railway systems should be unified so as to ensure administrative efficiency.²⁹ Moreover, there was a persistent interest, not only within government circles but also among the mercantile community, for the establishment of railway communication between Accra, the administrative capital, and Kumasi, the heart of Ashanti.³⁰ Nevertheless, it was the war-time discovery of bauxite at Kwahu which became the main driving force behind the decision to extend the Accra-Tafo railway to Kumasi.

Early in 1917, E.A. Kitson, Director of Geological Survey, located large deposits of bauxite on the top of the Ejuamena hills, which were situated mid way between Tafo, the eastern railhead and Kumasi the northern terminal of the western system. Given the strategic importance of bauxite, particularly in view of the fact that Britain's traditional sources of supply had come under threat from enemy submarines, leading to severe metal shortages in the United Kingdom, the discovery created a feeling of satisfaction in imperial circles. While the Ministry of Munitions ordered immediate chemical tests on the samples, Kitson was instructed to suspend all other duties in the colony, and to prepare a report regarding the prospects of working the ore.³¹

Kitson's report to the Colonial Office which was ready in April 1917, focussed on transport needs. As a short term solution, the road from Tafo to Kwahu could be improved immediately to withstand heavy traffic. However, given the advantages of rail transport, the eastern railway line should be extended to Kumasi and a three mile aerial ropeway established between the mine and the main line. Although

the bauxite deposits were only 110 miles from Accra, Kitson suggested that the ore should be shipped via Kumasi to Sekondi over a distance of 206 miles, because of the poor lighterage facilities at Accra.³² The Colonial Office accepted the report and the local administration was asked to take control of the deposits and to proceed to build the line, though construction did not start until after the war.³³

THE DEVELOPMENT OF LIGHTERAGE PORTS:

Once the Colonial Government embarked upon a railway construction policy that was primarily devised to stimulate production for metropolitan and world markets, it was bound to undertake parallel harbour developments at their coastal termini so as to facilitate transshipment of goods. Unlike the other West African Colonies of Sierra Leone and Nigeria, the Gold Coast lacked a natural deep water harbour, where ships could berth alongside wharves for direct transshipment of traffic. Consequently, goods had to be transported by means of surf boats between the shore and the ships which normally anchored up to about one mile in the open roadstead.³⁴ During the two decades after the start of railway construction in the Gold Coast, neither the Colonial administration nor expatriate commercial interests in the colony favoured the commitment of large scale funds towards the creation of a deep water port - the administration because it had to guarantee that any such project would be able to generate adequate revenue to cover its capital cost and interest charges to the British creditors, and private capital because it feared that any large scale harbour scheme would result in increased taxation.³⁵ Consequently, the authorities concentrated

on the development of lighterage ports at Sekondi and Accra.

When Messrs Coode, Mathew and Son surveyed the coastline in 1898, they drew up a plan for a lighterage port at Sekondi where traffic would be transported by means of lighters and other small craft between the shore and the steamers. This was to be similar to the arrangements at Port Elizabeth in South Africa. The scheme was to involve construction of a breakwater, 750 feet in length, under the lee of which an iron jetty, 300 feet long, was to be erected. This was to be in direct communication with the railway. The project, which was estimated to cost £99,000, was expected to be able to handle up to 400 tons of goods per day.³⁶ The Colonial Office agreed, and Coode, Mathew and Son were appointed Consulting Engineers with the construction itself, like the railways, being undertaken departmentally.

Work began in September 1898, when a temporary wooden jetty was erected to assist the landing of construction materials. However progress was extremely slow. By 1904, only a 50 foot iron jetty had been built, to the north of which a small platform was established where timber was stacked prior to shipment. £26,000 had so far been expended.³⁷ Such slow progress occurred at a time when the construction of the Sekondi - Tarkwa railway and its extension to Kumasi had transformed Sekondi into a major point of entry for the whole of the Western Province, Ashanti and a large part of the Northern Territories. When large consignments of railway materials and rolling stock, as well as heavy machinery and stores for the mining companies started pouring into Sekondi from 1901, the result was an acute *congestion* at the port. Not only was delay caused to ships which had to spend long periods before being unloaded, but the cost in human life and property was heavy.

for instance, in a heavy storm in April 1902, three out of the four tugs belonging to the Sekondi Lighterage Company were totally lost, "and wrecks to lighters were frequent."³⁸

One reason for the slow progress at Sekondi was that the local administration's attitude to the harbour project was one of extreme financial caution. Given that the large importation of railway construction materials and mining machinery were considered to be a temporary phenomenon, the government insisted that, before construction of the breakwater commenced, the mine-owners should guarantee that large scale importation of coal would be forthcoming, in order to justify the expenditure. However, the mine-owners were reluctant to give such an undertaking as they realised that it was cheaper to use local firewood than imported coal.³⁹

By 1907, the situation at Sekondi was so bad that the railways were forced to suspend the carriage of timber logs to the port because of lack of space to discharge the trucks.⁴⁰ At this point the local administration agreed to a proposal by the Consulting Engineers to review the entire harbour plan and Mr Cooke, a harbour engineer was sent to the Colony to report on the issue. Cooke's report, which became ready in 1908 recommended the immediate construction of the breakwater, the length of which was to be increased to 950 feet. In addition, four new jetties were to be constructed. The revised scheme was now estimated to cost £150,000.⁴¹ Construction eventually began in 1911, when orders were delivered. By 1914, when the work was temporarily suspended as a result of the war, the breakwater had been completed to 750 feet. Two of the iron jetties had also been completed.⁴²

The next impetus to port improvement at Sekondi came from the opening of the Manganese mines - another strategic metal - at Nsuta in 1916 when the export of the ore started with 4,338 tons. In order to facilitate transshipment at Sekondi, the mining company itself built a dump at the port which was capable of holding 10,000 tons of the ore. This was in addition to two new jetties that were constructed by the government for the sole use of manganese freight.⁴³

By 1919 when a scheme for a deep water harbour at Takoradi was far advanced, the Sekondi Lighterage Port consisted of a single breakwater, 976 feet in length, and four jetties - at a final cost of £189,443.⁴⁴

In the east, plans had been put forward for the improvement of port facilities at Accra as early as 1884. Like the Sekondi lighterage port, the main step towards better lighterage facilities at Accra came from the publication of Coode, Son and Mathew's survey report in 1898. The scheme, which included a breakwater, 800 feet long and a 270 foot iron jetty was estimated to cost £98,000.⁴⁵

Unlike the improvement of lighterage facilities at Sekondi which proceeded in an ad hoc fashion, as and when justified by traffic, the local administration was committed to the early implementation of the Accra lighterage plan in its entirety, mainly because it considered the longer term traffic expectations in the Eastern Province - cocoa and palm oil - to be more permanent and more reliable than those of the western mining districts.⁴⁶ Thus even before the Accra-Mangoase rail route was surveyed, the Government had agreed to the appointment of a Resident Engineer to undertake the work. Construction started

early in 1906 and by April, 1909 both the breakwater and the jetty had been completed.⁴⁷ Work on the Mangoase line had only just begun.

Hardly had the Accra lighterage port opened however, than it became apparent that the breakwater was so defective that the new lighters could not even use it for landing rolling stock for the new railway. One of the basic engineering deficiencies was related to the method of laying the underwater structure of the breakwater. It had been suggested that diving operations might be undertaken for the removal of sand deposits which would enable the foundations of the breakwater to be laid direct on the sea bed. But since financial economy was the guiding principle, the less expensive system of "pell mell" construction was adopted. Under this system, the foundation blocks were placed on sand overlying the sea bed and by the aid of the "swell" washing out the sand underneath, the blocks were then expected to settle down gradually onto the sea bed. The weights of the blocks used in laying the underwater structure were, however, too light to allow for easy settlement. Consequently, the walls began to silt.⁴⁸ Secondly the entrance of the breakwater was located approximately at right angles to the direction of the surf with the result that sand accumulation in the protected water also became a perennial problem.⁴⁹ From 1911 onwards, pumping of sand out of the breakwater in order to maintain a minimum navigable depth of 5 feet became a regular feature of port improvement at Accra. Although additional pumping installations were ordered in 1914, they were not delivered until 1916 because of the War. When finally erected in 1917, the engines could not be worked because of a shortage of coal. In that year, it was reported that the "wharf and

jetty are left high and dry owing to the heavy influx of sand."⁵⁰
 The entire harbour had been turned into a mass of sand upon which traffic was loaded into surf boats. Indeed the situation was so bad, especially during the rough surf season between July and November that "on most days work has to be discontinued early in the afternoon owing to bad seas caused by strong winds."⁵¹

In 1919, Messrs Stewart and McDonnell, Constructional Engineers for the proposed Takoradi harbour were charged with the additional task of devising a new scheme for the Accra Lighterage port. By that time total expenditure on Accra had reached £294,000.⁵²

CONCLUSION

The construction of the eastern railway and the development of lighterage ports at Accra and Sekondi followed on from the struggles over the selection of railway routes which took place in the late 1890's. Not surprisingly, developments between 1905 and 1918 tend to have strong parallels with the events that preceded it.

First, railway policy continued to be shaped by the different perceptions of individual administrators. Between 1898 and 1903 both Acting Governor Hodgson and Sir Mathew Nathan favoured the construction of an Accra-Kpong railway which they intended to assist the development of an European township as well promoting mercantile and agrarian interests in the Volta districts. But, just as the appointment of Maxwell as Governor in 1895 had the effect of diverting attention from the original Griffith-Lang railway strategy, so the arrival of John Rodger as Governor of the Colony in 1904 led to the abandonment of the

Hodgson-Nathan Volta proposal. The idea of a European township in a cooler interior location continued to have a romantic attraction and an element of mining influence did play some role in the adoption of the Accra-Ilangoase route. Nevertheless, in contrast to the western "pioneer" line, the Accra-Tafo railway was primarily designed to serve indigenous and expatriate commercial and agrarian needs, particularly the interests of the emergent cocoa districts of the Eastern Province.

Second, the eastern line, like the western one, was originally intended to be one of several short latitudinal lines to be constructed from the coast. However by the time the Accra-Ilangoase section had been completed, the authorities were overtaken by events, with the result that the eastern line, like the Sekondi-Tarkwa railway, was transformed into another principal trunk route into Ashanti (though final construction awaited the end of the war). The needs of metropolitan industries for a strategic mineral - bauxite - was the main driving force behind the proposed Tafo-Kumasi extension.

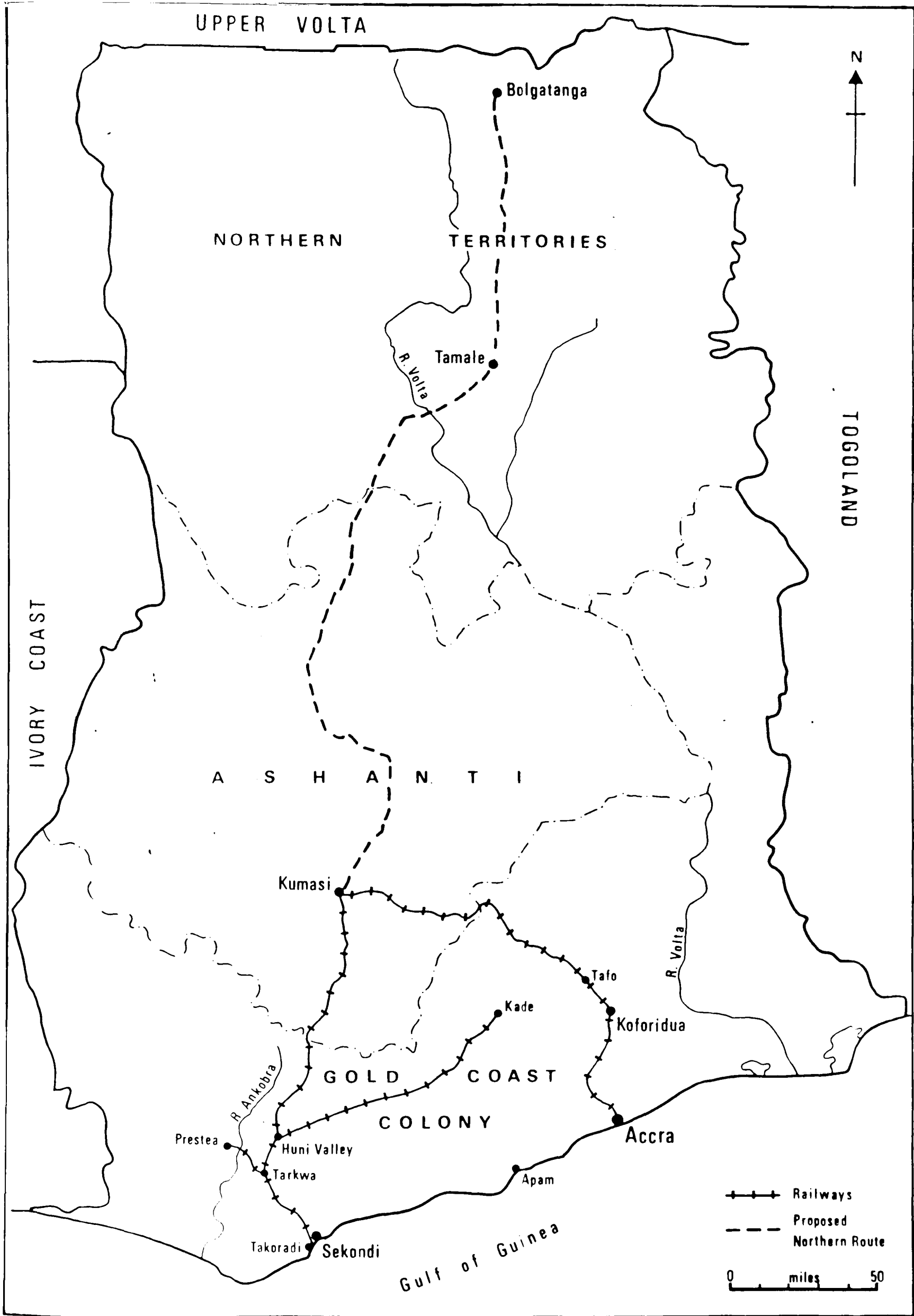
Finally, shoddy construction and technical defects in railway and port projects had become a major problem. In the case of the Accra lighterage port in particular, the deficiencies were causing severe bottlenecks in the conduct of trade, leading to a greater focus on Sekondi as the main point of entry. This particular trend was to assume significant proportions after the War.

NOTES TO CHAPTER 3

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Map 2 GOLD COAST RAILWAYS & PROPOSED NORTHERN ROUTE, 1922.

CHAPTER 4

POST-WAR EXPANSION - THE TEN YEAR DEVELOPMENT PLAN, 1919-1929

The post war spurt of relatively intensive infrastructural development marked a new phase in the history of British economic activity in the Gold Coast. Not only did the end of the war usher in a decade of rehabilitation of the existing transportation network, but more importantly, the period was marked by the emergence of long term Colonial economic planning - an innovation that found practical expression in the introduction of a Ten Year Development Plan in 1919 by the Guggisberg administration. The plan, which covered the period 1920-1930, provided for a capital expenditure of £24.5 million, under which various public works were to be undertaken. Two thirds of this sum was earmarked for harbour and railway schemes. By 1927, when the plan was abandoned, actual expenditure had reached £16 million, three-quarters of which went into the creation of additional transport infrastructure. The main projects undertaken were the building of a deep-water harbour at Takoradi, the construction of a Central Province railway and the extension of the eastern line from Fafo to Kumasi.

In certain respects it can be argued that this post war expansion was the inevitable outcome of the exceptional growth in the Gold Coast's external trade which followed two decades of railway building. In what follows however, we will argue that the nature of the expansion, both in terms of the projects planned and executed and those that were planned but never reached the construction stage, is best understood within the wider context of the post-war reconstruction of the metropolitan

economy itself. In other words, in deciding upon the kind of projects to undertake and where they were to be located, the Colonial administration was guided first and foremost by the immediate needs of the British economy, the needs of the local economy were considered to be secondary.

THE POST-WAR RECONSTRUCTION IN BRITAIN AND THE NOTION OF "COLONIAL DEVELOPMENT":

The outbreak of war in 1914 exacerbated inherent problems within the British economy and from the process of rebuilding the post-war economy, the notion of "Colonial development" emerged. The Colonies, especially those in Tropical Africa, were to be called upon to assist the regeneration of British capitalism.

In the first place, the war had clearly demonstrated the overdependence of the British economy (particularly its armament industry) on sources outside the Empire for the supply of raw materials. This lesson was learned at the outbreak of hostilities in 1914 when the supply of manganese ore from the Caucasus was cut off at a time when shipments from Brazil and India were also becoming increasingly difficult to obtain because of the submarine menace. There was therefore an acute shortage of ferro-manganese in the United Kingdom.¹ Indeed, as previously noted, the Ministry of Munitions had to curtail the use of strategic metals in the civilian sector in order to meet war needs. To provide a longer term solution to the problem, the British Government authorised general geological surveys throughout the Empire, especially in the relatively unexplored Colonial territories of Tropical Africa. The aim was to establish Imperial control over sources of strategic metals.²

Secondly, the War undermined British commercial supremacy. Not only did the United States, Japan and other industrialised nations capture traditional British markets, but there was also a general trend after the War towards economic nationalism. As E.A. Brett points out, this trend was marked in the non-colonial world by the rise of governments who were committed to protectionism and direct subsidies in order to displace British goods.³ Moreover, during the war, the Imperial Government had conceded considerable autonomy to the self-governing Dominions, as well as India, over economic matters.⁴ From then on the Crown Colonies came to be seen by some as being of crucial importance to the British economy. Thus, the Empire Resources Development Committee for instance, suggested in 1917 that important Colonial assets, such as West African palm production, should be nationalised and operated as a state monopoly so that the profits could then be used to pay off Britain's national debt.⁵ Leopold Amery summarised the overall picture:

We are in fact, no longer the sort of country that can compete industrially in the open market, except in certain industries ... It really comes to this that we can both carry out our social reform, and develop an immense trade but mainly, if not almost entirely within the Empire.⁶

It was in the midst of this urgent need to create conditions under which trade and industry could thrive that Lord Milner was appointed Secretary of State for the Colonies early in 1919, an appointment which was to lead to Colonial policy in the twenties being in the hands of men whom Ian Drummond has described as "Imperial Visionaries"⁷ (Lord Milner, Leo Amery, Jimmy Thomas, William Ormsby-Gore.) Milner had always regarded the Crown Colonies, especially those in Tropical Africa, in the true "Chamberlainian" sense as rich imperial estates, that were

still awaiting systematic development. Early in 1913, even before the War broke out, he was seriously deprecating imperial financial policy towards the Colonies. Milner wrote:

I suppose Colonial development is a question of money and though we are so much more liberal than we used to be, I do not think we are as yet anything like liberal enough in the conception of what is needed for the equipment of an underdeveloped country and in how much you must spend without immediate return if you are going to make a success in the long run.⁸

As Secretary of State, Milner's immediate task was to popularise his long cherished notion of liberal Colonial economic development. "Those people who terrify me are those who talk of a restriction of credit (to Colonies)",⁹ he told the powerful Manchester Chamber of Commerce when he called for a much bolder policy of railway and other infrastructural investments. Speaking to Crown Colony Officials at the Annual Corona Club Dinner, Milner stressed that in the Colonies, as in Britain, reconstruction should mean something more than the restoration of pre-war conditions by paying more attention to the problem of public health and native education because demand for self-government was bound to grow.¹⁰

Milner established a more effective Colonial Development Council to supercede the moribund Empire Resources Development Committee. The Council was to make a systematic survey of economic potential in all parts of the Empire and submit recommendations to the Colonial Office. By November 1919, the Council had begun to study the most urgent harbour and railway projects:- the Ugandan Railway, the improvement of the Tanganyika system, the Trans-Zambesian railway to Lake Nyasa, the

enlargement of Kilindiri harbour, and the creation of a deep-sea port at Takoradi in the Gold Coast.¹¹ In the Colonial Office programme of post-war expansion in the Colonies, the Gold Coast was obviously placed at a high level of priority. As Amery points out, Milner appointed Sir Gordon Guggisberg, a Canadian born Royal Engineer, as Governor of the Gold Coast. Guggisberg was given the clear objective, inter alia, of "creating a first class ocean port at Takoradi."¹²

GUGGISBERG: THE TEN YEAR DEVELOPMENT PLAN AND TAKORADI HARBOUR:

When Sir Gordon Guggisberg was appointed Governor of the Gold Coast at the end of the War, he was neither a stranger to the colony, nor to West Africa for that matter. As a young Lieutenant in the Royal Engineers, Guggisberg was seconded to the Colonial Office in 1901, and posted to the Gold Coast as an Assistant Director of the newly created Mines Survey Department. In 1906, he left the Mines Survey Department to establish a new Survey Department, where he remained Director until the end of his contract in 1908. Two years later in 1910, Guggisberg returned to West Africa as Director of Survey in Southern Nigeria, and for a few months in 1914 he was Director of the Gold Coast Public Works Department until recalled to the Army for active service in Europe.¹³ In Guggisberg therefore, the Colonial Office found, at a time when it was most needed, the West African specialist, capable of carrying out the proposed post-war programme of expansion.

That the main momentum for change came from London is further evidenced by the fact that barely one month after his assumption of duty in the Colony, Guggisberg had already presented a Ten Year Development

Plan to the Legislative Council - on 17 November, 1919. In this plan, the Governor outlined his overall development strategy covering the period 1920-1930. A detailed analysis of the plan lies outside the purview of this study, but several general points need to be made. First, the plan was noted for its large financial commitments, amounting to no less than £24.5 million. Second, transport infrastructure, especially railway and harbour projects continued to be accorded the highest priority in Colonial development. Not only was two-thirds of the estimated expenditure under the plan earmarked for these works, but also the first four years (1920-1924) were to be devoted solely to them. Moreover, these projects would continue to be funded, as before, largely through loans raised on the London money market. Third, the plan contained provision for some welfare projects, such as education, water supply, electricity power and health, but these were to be funded from surplus revenue raised in the Colony because they could not generate direct revenue to cover their costs. Finally, Guggisberg regarded the construction of a deep-water harbour at Takoradi as the starting point of his plan. As he reiterated in a despatch to the Secretary of State during his second month in the Colony:

So profoundly convinced am I of the unlimited potentialities of the Colony if modern transport facilities are provided that I unhesitatingly place the deep-water harbour at the head of my programme.¹⁴

Despite the reforming zeal of Guggisberg, few of his ideas achieved implementation. The constraints which dictated Colonial practice soon made themselves felt, so that even by the new development criteria which entered post-war Colonial economic policy, the Gold

Coast fell short of target. Investment levels were relatively high, but were applied mainly to the creation of a deep-water harbour on the western sea board at Takoradi and to the construction of a line through the central agrarian (mainly cocoa producing) districts so as to divert traffic to the port. This particular element in the post-war transport strategy was the most *disastrous* of all the administrative undertakings in the history of the Colony, for hardly had the line opened than there was talk of abandoning it because of severe motor competition. Indeed, by 1927, the entire Ten Year Plan had been abandoned. The authorities retreated to the dream of ensuring sufficient traffic for the existing transport network rather than extending the system. The story of this retreat is a complicated one and is best understood within the context of the priority accorded to the deep-water port in particular and its associated rail routes over road and other surf-ports on the one hand, and contradictions within regional economic development in the Gold Coast on the other.

Kay's critique of the Guggisberg transport strategy which focusses on the location of the deep-water harbour forms a suitable starting point.¹⁵ According to Kay, the decision to locate the port at Takoradi was not simply a question of technical preference of one site or another, but rather one that favoured expatriate capital as opposed to indigenous capital. Having sited the port at the western end of the seaboard, to serve the mines, Kay argued, the authorities then built a central line across the cocoa growing districts which they intended to carry indigenous cocoa traffic to Takoradi so as to subsidize the expatriate mining sector. The location of this particular central line, he also

asserted, constituted a second major flank in the attack on indigenous capital - namely the infant road transport system which was mainly controlled and used by Africans, and to a limited extent certain expatriate firms. Kay did not produce any evidence concerning the policy decisions leading to the formation of transport strategy during the twenties. One must thus conclude that his analysis was simply based on an observation of the physical structure of the post-war transport network that had been established, rather than on an attempt to evaluate how that particular configuration came into being.

Nevertheless, Kay's assertion that any meaningful evaluation of the Guggisberg transport strategy must begin by focussing on the role and influence of the Takoradi deep-water port within the Guggisberg plan is accepted. There is a definite need to establish the precise role the authorities intended Takoradi to play within the proposed infrastructural expansion of the twenties. For analytical purposes two main aspects can be identified within the deep-water harbour scheme. First the location and capacity or size of the port and their implications for new rail routes, and second the inability of the Colonial Government to undertake and supervise large scale construction works efficiently. Their combined influence on transport strategy during the twenties was so extensive that little will remain to be said once its effects have been examined in detail.

As noted in the previous chapter, deficiencies in lighterage ports, especially at Accra were becoming a constraint on the growth of seaborne trade. Apart from the large annual expenditure on dredging, it had long become evident that purely lighterage ports were in fact no

real substitutes for a deep-water harbour, at which ships could tie up and unload directly onto wharves. Not only was the lighterage system cumbersome in itself, but it also entailed another layer of middlemen with charges, and consequently increased handling costs. Thus as early as 1912, only one year after the construction of the Sekondi lighterage port had begun, Messrs Coode, Son and Mathews, suggested that a survey should be undertaken of the relative merits of Takoradi, Sekondi and Accra with a view to building a deep-water port. However, nothing immediately came of the proposal.

Nevertheless, the main impetus towards the construction of a deep-water harbour in the Gold Coast, and the decision to locate it at Takoradi appears to have come more from two new sources, which were based upon the demands of the post-war British economy rather than from either of the "traditional" expatriate mining or mercantile interests operating in the colony (- both of which were generally opposed to large scale harbour works, partly because of their fear of additional taxation). The first and perhaps the most important demand came from strategic metal interests who wanted a modern harbour to serve the newly opened manganese mines at Nsuta, 33 miles from Sekondi, and barely 3 miles from the main Sekondi-Kumasi railway. Although the Government acquired the manganese deposits direct from the chiefs, the mining concession itself was granted to Mr Edward Davies, whose company, Fanti Consolidated Mines Limited had guaranteed the construction of the Parkwa-Prestea branch railway in 1908. Davies floated a new company, the African Manganese Company which commenced mining operations at Nsuta in 1917. The immediate drive towards the construction of Takoradi then followed in 1918 when Davies submitted a programme of expansion to the Colonial Office.

According to this programme, not only were the Asuta mines capable of meeting the demands of the U.K. market, but it would also earn foreign exchange which was crucial for Britain's post-war reconstruction. For instance, it had already won a contract for the sale of manganese ore to the United States at the minimum tonnage of 100,000 per annum for the next five years. Davies however, stressed that the programme's success depended upon two factors, namely, cheap railway charges and efficient but cheap port facilities. He argued that the current rates on ore delivered at Sekondi were as much as ten times more than ore delivered at Bombay using the Indian Railways. He therefore argued that a deep-water harbour should be built at Takoradi without delay.¹⁶ Then in January 1919, even before the Colonial Office had considered the proposal, Davies approached Rear Admiral John Parry of the Royal Navy, "to obtain an opinion as to the feasibility of constructing a deep-water harbour on the coast in the vicinity of the (manganese) mines."¹⁷ Not surprisingly, when the Colonial Office eventually committed itself to the proposed harbour scheme by engaging Messrs Stewart and McDonnell (a Canadian firm of Civil Engineers) to draw up the plan, Admiral Parry was selected to head a team of eighteen to conduct the necessary surveys in the Colony. This team would report to Messrs Stewart and McDonnell.

The team of surveyors arrived in the Colony in December. They spent the first two weeks examining the coastline after which they held consultation with the new Governor as to the location of the port. It is significant to note that like the centrally located integrated transport strategy advocated by Griffith and Lang three decades previously, the surveyors suggested that the harbour should be sited

at Apam, the most central surf port on the seaboard. According to Parry, given the "rectangular" shape of the country - an average of 200 miles of coastline (the width of which narrows as one moves into the hinterland) and an average of 400 miles between the sea and the northern borders - such a centrally located deep-water port could be made to serve 90 per cent of the total land surface as the focal point of entry for the Colony, Ashanti and the Northern Territories.¹⁸ The scheme would require the construction of a new rail route from Apam through the central agrarian regions to Kumasi and possibly to the North. Perhaps the most attractive aspect of a centrally located sea port was that it would serve the needs of the cocoa industry more effectively - an industry which had become the backbone of the Gold Coast's exports and imports trade. Nevertheless, the weight of opinion created by the manganese lobby had already had its effects. The issue of location of the harbour had already been made a part of the Ten Year Plan. The main task of the Surveyors, Guggisberg stressed was to concentrate on the hydrological survey of **the Sekondi-Takoradi** area so as to enable outline plans to be designed, and costs estimated. Not surprisingly, when Stewart and McDonnell published their report in 1920, they recommended in favour of Takoradi by emphasising its technical superiority over all other surf and lighterage ports. In short, the interests of the manganese industry was the decisive factor in the location of the deep-water port.

The other important influence on Takoradi, was connected with the demands of British commercial interests for the promotion of new export crops in the Northern Territories, in conjunction with Guggisberg's personal commitment to the economic development of the region. A

preliminary survey for a railway line to the North had been conducted as early as 1900, as a consequence of the mining boom of that time, and the hopes of the British Cotton Growing Association for the promotion of cotton production in the territory. But serious consideration of the region's economic potential only occurred in the post-war years, when a number of the expatriate trading firms, including Lever Brothers and later the United Africa Company, made several representations to the Government calling for the construction of a railway to open up the territory.¹⁹ The main commodities of interest to British commerce and industry were cotton, groundnuts and shea-butter. In addition, Guggisberg himself appeared to have a special sympathy for the region (during the war he had applied for the position of Chief Commissioner for the Northern Territories) and he believed that it had significant agricultural potential. Early in his administration he announced that:

... the whole future of the Gold Coast is bound up with the development of the groundnut and shea-butter industries of the Northern Territories ... With a railway there, and a deep-water harbour at the end of it, we should have 300 miles less of sea transport than (Northern) Nigeria to the markets of the world.²⁰

Thus, Guggisberg intended the Takoradi deep-water port to become the focal point of entry upon which an entirely new imports and exports trades of the Northern Territories would be based. As part of the programme, the "pioneer" western line would be reconstructed to withstand heavy traffic, and from the Kumasi railhead, an additional 250 mile track would be laid to Tamale. Of course, Takoradi was also intended to be the "central terminal base of the (Gold Coast) Colony's railway system, and from this all railways were to be based."²¹ In other words, the

authorities did envisage that relatively cheap rail transport, together with more efficient harbour facilities at Takoradi, would naturally result in a diversion of part of the existing imports and exports trades of the central districts to the new port. The aim was to ensure a maximum utilisation of the port, and hopefully the demands of the manganese mines for low rates could also be met through the advantage of economy of scale. Nonetheless, during the formative years of the Guggisberg plan, it was the traffic expectations from the Northern Territories along with manganese ore rather than existing traffic from the central cocoa growing districts which was the more important determining factor regarding the location and scale of the proposed harbour. Thus, this "Northern Territories factor", which was so crucial to the understanding of the subsequent failure of the Guggisberg transport strategy was not brought out by Kay.

Given the high traffic expectations, and in view of Guggisberg's policy of making the port the principal point of entry, Stewart and McDonnell went ahead to design Takoradi on a massive scale in order to meet those expectations. Takoradi, when completed, would cost £5 million including a township and connecting railways and roads to Sekondi. The harbour itself would involve the construction of an artificially protected sea area about one mile long containing tidal basins, piers, quay spaces and no less than 10 berths as follows:

- 2 mail steamer berths,
- 2 general cargo berths,
- 2 manganese ore export berths
- 1 coal berth

- 1 timber export and building material import berth
- 1 coastal branch boat service berth
- 1 railway material and machinery unloading berth²²

Clearly, the proposed deep-water port was an ambitious scheme and its success would make or break the post-war transport strategy.

One of the problems that faced the Takoradi harbour project was related to the inability of the Colonial government to undertake, and properly supervise, large scale construction works. Although the scale of harbour accommodation at Takoradi was eventually reduced to six berths, and estimated to cost £1.6 million, the implementation of this "interim scheme" was not without severe construction problems, involving delays, the withdrawal of Stewart and McDonnell from the project, and the eventual doubling of estimated cost. Although work started in 1921 (and was estimated to be complete by December 1924), by 1923 only the provision of support services (construction workers' living quarters, water supply, a hospital, a coastal railway line to connect Sekondi, as well as the construction of a granite quarry) had been completed. Work on the breakwater itself had just begun. At this point, a three month extension was granted, but when in January 1924 the completion date was again extended by one year to June 1926, and the cost to £1.9 million, both the Colonial Office and Guggisberg agreed that an independent investigation should be made, and in April 1924, Mr Palmer, of Rendel, Palmer and Irriton a Westminster harbour consultancy firm, visited the site. Palmer's report, which became ready in September, estimated that the harbour would now cost £2.5 million, and suggested that the work be put out to contract. Following the publication of this report, Stewart

and McDonnell withdrew from the project and Rendel, Palmer and Irriton were appointed Consulting Engineers. The work itself was tendered and was won by Sir Robert MacAlpine and Son.²³

The causes of the delays, especially the events leading to the withdrawal of Stewart and McDonnell from Takoradi, cannot be explained simply in terms of Colonial Office and mercantile opposition to the deep-water harbour scheme as Wraith, Guggisberg's biographer would want us to believe.²⁴ As Meredith points out, there was certainly opposition from the expatriate merchants, but the Colonial Office was by no means opposed to the project.²⁵ Indeed, it is doubtful if mercantile pressures constituted sufficient force to alter official commitment to Takoradi. For instance, when, as a result of the post-war trade slump, the unofficial members of the Legislative Council tabled a motion in February 1922, calling for the postponement of work on the harbour, Guggisberg simply brushed it aside, and asserted that the real solution to a trade slump would be to expand rather than retrench.²⁶ On the other hand, to say that, "the real failing of the 1919-1924 period of construction was the adoption of a departmental method of construction with the supervision of Engineers, whose exact position was never clearly defined"²⁷ is also to be telling only half the story. Disquiet was certainly felt within the Colonial Office and the administration over Stewart and MacDonnell's position as both Consulting Engineers and Construction Engineers, and the possible conflict of interest which arose. However, the principal setback, which was entirely beyond the control of the Engineers, was the post-war labour unrest in Britain which prevented the delivery of construction materials until 1923. This was complicated by the Colonial Office policy of favouring British manufacturers which

prevented Stewart and MacDonnell from placing orders for materials and equipment outside the U.K.²⁸ In this regard, it must be noted that given the experiences of war-time disruption of trade between the Gold Coast and the mother country, leading to a greater reliance on North American markets for the Colony's imports and exports, the Guggisberg administration came to regard the promotion of trade with Canada and the U.S. as a means of attracting investment capital.²⁹ Indeed, the Governor, (himself a Canadian) had insisted on the appointment of Stewart and MacDonnell to undertake the work because "as Canadians their appointment would stimulate interest in Canada in the Gold Coast."³⁰ Clearly, one perceives a conflict of interests between the metropolitan economy on the one hand and the Colonial economy on the other. This important factor which mitigated against the smooth conduct of the work has not been brought out by Meredith who has placed too much emphasis on the inexperience of Stewart and McDonnell together with the unsuitability of the Departmental System of Construction.

Consequently, it is not surprising that some of the most serious construction problems, especially shoddy works, emerged after the project was entrusted to some of the top harbour engineers in the U.K. As soon as MacAlpine took over the work in September 1925, he proposed that by "intensive working" he could finish the harbour ahead of schedule, and so a bonus system was agreed between the Engineers and the Crown Agents whereby MacAlpine would receive £1,500 for each week that the project was completed before December, 1930. The work continued with vigour so that by April 1928, the harbour was opened, i.e. some twenty months ahead of schedule. However, hardly had the "completion certificate" entitling MacAlpine to the bonus been granted than it became

apparent that a number of the cylinders on which the wharves rested were seriously defective, "being filled with rubble instead of concrete, and cracking at water-level over a distance of 190 feet."³¹ Although a Colonial Office enquiry attributed the defects to "hurried work" and "sharp practice" on the part of the Contractors, McAlpine was never made to forfeit the bonus payments. It took up until December 1930, to rectify the defects at a final cost of £3.5 million.³² Thus, once again, the perennial problem of shoddy construction and technical defects in railway and harbour projects came into a sharper focus. More importantly, the failure of the authorities to implement the harbour scheme more promptly and efficiently meant the diversion of attention from other elements in the transport strategy.

RAILWAYS AND ROADS

The provision of additional railway mileage was the second major flank in Colonial transport policy during the twenties. Of the £24.5 million estimated cost of the Ten Year Plan, more than half had been earmarked for railways. Road transport continued to be assigned a secondary role, as a feeder system to the railways. On the construction and maintenance of motor roads Guggisberg wrote: "indirect revenue there may be, but, directly, money is all going out and none coming in."³³ As well as generating revenues for the local administration, railways had the additional advantage of stimulating metropolitan heavy metals and engineering industries. Of the 600 miles of new railway lines that had been proposed and surveyed however, only 230 miles was eventually built.

The first railway project embarked upon after the war was the reconstruction of the Sekondi-Kumasi "pioneer" line, which was in a poor state of repair. This line, originally started as a short light railway to serve the Tarkwa mines, became, when it was extended to Kumasi, the principal trunk route in the country. The heavy traffic which was carried could not cope with the steep gradients and sharp curves on a line which had been designed for light traffic. The nature of the line hampered the speed of trains and caused frequent derailments, but more importantly it resulted in serious problems of track maintenance. The situation was particularly bad on the section between Sekondi and Nsuta because of the heavy manganese traffic. Consequently, in 1919 it was decided to reconstruct the entire 168 Sekondi-Kumasi line and also to absorb the Manganese station at Nsuta (previously connected by a 2½ mile branch line) into the new line. The reconstruction was also expected to meet the needs of the Northern Territories. By the time the work was completed to Kumasi in 1925, nearly £2 million had been spent.³⁴

As well as the Sekondi-Kumasi reconstruction, the extension of the Accra railway from Lafo to Kumasi attracted the Government's attention immediately after the war. As previously noted, the construction of this extension was intended to place the Ejuamena Bauxite deposits on a rail route. A team of construction engineers arrived in the Colony early in 1920. Although arrangements were made to carry out the work simultaneously, from both the Lafo railhead and the Kumasi terminus towards the Bauxite deposits, work could not begin on the Accra section until April, 1921 because conditions at the port were so bad that construction materials could not be landed. Thereafter, work progressed

from both directions until on 3 September 1923, when the stations at Bompata, Prahso and Akwaseso were opened thus linking the two lines.³⁵ A through railway communication from Accra via Kumasi to Sekondi, 360 miles, had now been established.

The construction of the proposed railway from Kumasi to Tamale to open up the Northern Territories was the next important railway-building scheme. Although a survey conducted on the 250-mile route in 1922 had established the feasibility of the proposed northern line, it soon became evident that the scheme would not come to fruition.³⁶ The main reason was that the continued development of the Colony and Ashanti was incompatible with the simultaneous development of the Northern Territories. Given that there were local labour shortages in the south, leading government public works, the mining companies and indigenous cocoa farmers to depend on external sources of labour supply, the authorities came to regard the underdevelopment of the north as a means of securing a cheap labour reserve for the south. A decision not to proceed with the northern railway was taken in 1922. Guggisberg later wrote:

To encourage agricultural production in the Northern Territories by constructing a railway before the development of communications in the south would result in the greater part of this labour being lost. For the above reasons, I have deliberately sacrificed for the moment the development of the agricultural products of the North.³⁷

Thus it is an irony that the abandonment of the line into the Northern Territories was decreed by the very Governor whose commitment to the development of the region had earned him the nickname "faddist". However, the decision was to have important repercussions on the general transport strategy.

The deep-water port at Takoradi was designed on a large scale partly with the view of handling traffic from the north. Having abandoned the proposed railway to the north, attention switched to the alternative of a railway through the central cocoa producing districts, conveying traffic to Takoradi which would help make the port viable. In the aftermath of the decision not to build the northern line, Stewart and McDonnell suggested that a central belt railway should be built parallel to, and some distance back from the coast to connect with the western line.³⁸ The proposal was taken seriously and a sum of £30,000 was allocated towards a survey of a central rail route. The surveyors' report, which was ready early in 1923, occupied ninety pages and contained detailed topographical maps and traffic estimates. The proposed line, the report suggested, should commence from Huni Valley, 53 miles north on the Sekondi-Kumasi line, should run across the Central Province for a distance of a hundred miles, and should connect the newly located diamond mines at Kade. It would cost £1.6 million. The line would serve an area of 5,582 square miles having a population of nearly half a million. The main produce of the region, cocoa, amounted to 32,000 tons in 1921 (22 per cent of which remained unmarketed due to lack of transport) and this figure was expected to rise to over 54,000 tons by 1930. The line would also rejuvenate the palm oil industry and encourage the production of Kola and timber. The motor roads that served the area, the report further argued, were of inferior quality, suitable only for the conveyance of light traffic, and besides Guggisberg and the surveyors believed that lorry traffic could not operate profitably beyond 30 miles from the coast. Events would however prove them wrong. Finally, the proposed railway would earn £136,000 per annum on goods traffic alone, and at a working

cost of £63,000, it would then be profitable to operate.³⁹

Despite the glowing report, there was strong opposition to the construction of the line. The West African Section of the London Chamber of Commerce, for instance, objected to the construction of the line on the grounds that there were favourable prospects of the infant lorry transport developing to serve the Central Province.⁴⁰ For the first time indigenous opinion was also consulted regarding railway projects when the Governor held a series of conferences between June and September 1923 at Accra, Cape Coast, Saltpond and Winneba to publicise the scheme. Like the expatriate mercantile community, the spokesmen for the African communities were also opposed to the project. Some said money should be spent instead on welfare services. Others feared that such a central belt railway would destroy the commercial importance of the central coastal towns.⁴¹ The Omenhene of Assin for instance, called for the line to be constructed to Cape Coast since his "people have never been to Takoradi"⁴² - meaning that trade had never flowed in an east-west axis. Nevertheless, the Colonial Office gave approval for the construction of the Central Province Railway in 1924 because, "the choice of this route for the railway would enable the maximum of produce to be brought to the harbour and so reduce the charges to be imposed at the port."⁴³

Even before the Secretary of State's approval was received, construction had begun in September 1923 with the clearing of forest and earthworks at Huni Valley. On the whole, the line experienced fewer construction problems than any of the previous railway and harbour works. No extensive rock cutting was needed and suitable ballast material was located alongside the route in large quantities. Construction

proceeded fairly rapidly so that by 1925 the line was completed to Nsuaim (Oda) 80 miles. The only obstacle was a 260 foot span bridge over the Birim River, the orders for which **could not** be delivered until May 1927 due to the coal strike in Britain. By August the bridge was eventually erected which enabled the permanent way materials to be laid on the remaining eighteen mile section.⁴⁴ In all fourteen stations were opened along the line, the principal one being at the Kade railhead where an extensive locomotive depot was constructed. Four miles of sidings were also laid there to connect the diamond mines. The total cost of this line including locomotives and rolling stock was £1.6 million - a figure that fell short of the original estimates by some £50,000.⁴⁵

However, no sooner had the line opened than it became apparent that the official expectations of the railway, especially the belief in the general superiority of railways over lorries, had been based on a gross underestimation of the potential of road transport. As the General Manager of the Railways reported in 1927:

At present time the traffic of the principal towns along the route is carried by lorry at the rate of 1s per ton mile, the reduction in cost being due to better roads, cheaper petrol, better and more powerful lorries and better transport organisation of the motor transport companies.⁴⁶

Consequently, he concluded that the Central Province Railway was "up against established competition" and traffic would continue to be carried by motor lorries so long as the roads remain. As a consequence of the incidence of motor competition on the new central line, together with the difficulties which had surrounded the construction of the Takoradi deep-water port itself (particularly the escalation in the cost of the project), the Colonial Office suspended the Guggisberg plan in 1927.⁴⁷

Thus the completion of both the Deep-Water Harbour and the Central Province Railway marked the completion of the Gold Coast's basic railway network and associated ports and harbours.

CONCLUSION

The post-war infrastructural expansion in the Gold Coast can be viewed as a new phase in the British pressure, consequent upon the First World War, for greater overseas markets and better sources of raw materials, particularly strategic metals. Unlike the pre-war strategy under which construction of railway lines took priority over port and harbour development, during the twenties, within the Guggisberg programme, and because of the pressure of metropolitan strategic metal interests, the Takoradi deep-water harbour took precedence. Despite the obvious advantages of a centrally located harbour and its associated railway lines, particularly the prospects of serving the needs of what had become the Gold Coast's leading export commodity - cocoa - more effectively, the authorities decided in favour of the western end of the seaboard at Takoradi. Thus Kay is generally correct in arguing that the location of the port at Takoradi favoured expatriate capital as opposed to indigenous capital. Nevertheless, the pressures exerted by the metropolitan economy in its search for strategic metals - manganese - in conjunction with British mining capital as distinct from British capital in general, needs to be highlighted. Expatriate mercantile needs in the central and eastern districts would have been served better had the port been located differently.

Takoradi can be regarded as something of a "cuckoo-in-the-nest" - not only because of the substantial amounts of funding it required,

diverting revenues and resources away from alternative patterns of expenditure, including possible railway and road construction in areas still deficient in modern transport, but also in the way it influenced further railway development. The aim of both the Tafo-Kumasi extension and the Central Province line was to bring traffic westwards or south-westwards to Takoradi. The authorities, having committed themselves to a harbour with such a large capacity, the whole centre of gravity of the Gold Coast's imports and exports trades had to be shifted westwards to focus on Takoradi. But the appearance of a newer, and more flexible form of transport - motor lorries, threatened to undermine that policy even before it was fully operational. The need for a central belt railway line conveying traffic to Takoradi in particular arose as a consequence of the decision not to construct the northern railway - a decision which highlights the **contradiction** between the demand for northern labour by metropolitan and indigenous economic interests operating in the Colony and Ashanti and the expansion of commodity production into the Northern Territories. The operation of these diverse and complex social and economic interests were intertwined not only with decisions as to where railway lines and harbours were to be built but also with the mobilisation of resources for construction and the operation of the transport system. It is to the discussion of these latter elements we now turn in Part 2 of the thesis.

NOTES TO CHAPTER 4

1. Secretary of State for the Colonies to Governor of the Gold Coast, 29 December, 1917, Public Records Office: C.O. 96/584; also Stanley H. Ford, "Manganese in West Africa", The Mining Magazine, 7, (December, 1919), 270 - 272.
2. Ibid.
3. E.A. Brett, Colonialism and Underdevelopment in East Africa, (London, 1973), 115.
4. John Marlowe, Milner Apostle of Empire, (London, 1976), 324.
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6. Cabinet Papers, Minutes of the meeting of 25 November, 1919, quoted in Brett, Colonialism and Underdevelopment, 115.
7. Ian M. Drummond, British Economic Policy and the Empire, (London, 1919), 43; also see Leopold S. Amery, My Political Life, Vol. 2, (London, 1953), 210.
8. Alfred Milner, "Crown Colonies", The Nation and the Empire, (London, 1913), 468.
9. T.H. O'Brien, Milner: Viscount Milner of St. James' and Cape Town, (London, 1919), 324.
10. Ibid, 350.
11. See Antrobus' Minutes to Secretary of State, 17 November, 1919, P.R.O. C.O. 96/612.
12. Amery, My Political Life, 188.
13. See R.E. Wraith, Guggisberg, (London, 1967), 24 - 54.
14. Governor's Annual Address; Legislative Council Debates, 1921 - 2, 29 - 48.
15. G.B. Kay, The Political Economy of Colonialism in Ghana: a Collection of Documents and Statistics (Cambridge, 1972), 20 - 21.
16. Edward Davies to Colonial Office, 21 March, 1918, P.R.O. C.O. 96/584; also see Ford, "Manganese", Mining Magazine, 7, (1919), 270 - 272.
17. Messrs. Stewart and McDonnell, Report on the Takoradi Harbour and Railway Terminus, (London, 1920), 30.

18. See Guggisberg to Secretary of State (on Transportation), 9 November, 1920, P.R.O.: C.O. 96/619.
19. See Despatches Relating to the Construction of a Railway between Kumasi and the Northern Territories of the Gold Coast, Sessional Paper No XIV, 1929 - 30.
20. Guggisberg to Secretary of State, 9 November, 1920, P.R.O.: C.O. 96/619.
21. Ibid.
22. Stewart and McDonnell, Takoradi Harbour, 6 - 8.
23. Colonial Office Minute of 13 September, 1924, P.R.O.: C.O. 96/651.
24. Wraith, Guggisberg, 98 - 108.
25. D.G. Meredith, "The British Government and Colonial Economic Development, with particular reference to British West Africa, 1919 - 1939", University of Exeter PhD, (1976), 152.
26. "It would show the most supreme lack of courage if I gave way and allowed the motion to stop the work ... I am perfectly within my powers and still adhere to my decision", (F.G. Guggisberg, The Gold Coast: A Review of Events of 1920 - 1926 and the Prospects for 1927 - 28, (1927), 87.
27. Meredith, "British Government", 180.
28. Guggisberg, Events, 87 - 88.
29. See Guggisberg to Colonial Office 9 November, 1920, P.R.O.: C.O. 96/619.
30. Ibid.
31. Colonial Office Memo on Takoradi Harbour, 7 August, 1928, P.R.O.: C.O. 96/681.
32. Colonial Office Memo on Takoradi, 13 December, 1930, P.R.O.: C.O. 96/694.
33. Governor's Annual Address, Legislative Council Debates, 1921 - 22, 33.
34. See Governor's Memo of 3 March, 1926 (on Transportation) to Honourable Omsby-Gore, Visiting Parliamentary Under-Secretary of State for the Colonies, P.R.O.: C.O. 96/663.
35. General Manager, Railways Report, 1922 - 3, 22 - 27.
36. See Despatches Relating to the Construction of a railway between Kumasi and the Northern Territories of the Gold Coast, Sessional

- Paper No. XIV, 1929 - 30.
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 38. Gold Coast, Correspondence Relating to the Construction of the Central Province Railway, Sessional Paper No. 14 of 1922 - 23, (1923), 21.
 39. Ibid. 25 - 27.
 40. West African Section of London Chamber of Commerce to Colonial Office, 22 December, 1922, P.R.O: C.O. 96/635.
 41. Central Province Railway, 29 - 30.
 42. Ibid., Memorandum submitted by Omanhene of Assin, September, 1923.
 43. See Antrobus' Minute, Colonial Office, September, 1924, P.R.O: C.O. 96/651.
 44. Governor to Secretary of State, 18 August, 1927, P.R.O: C.O. 96/681.
 45. Ibid.
 46. Report of the Central Province Trade Routes Committee, Sessional Paper No. 6, 1928 - 29 (1929), General Manager of Railways Memorandum of 26 May, 1928, enclosed as appendix IV.
 47. See Guggisberg, Events, 72 - 73.

P A R T I I

CHAPTER 5

THE RECRUITMENT OF CONSTRUCTION WORKERS AND COLONIAL LABOUR POLICY

The construction of railways normally requires a very large labour force and this was all the more true when, as in the Gold Coast, railways were being built in difficult environmental conditions. The most basic demand was for the mass of unskilled workers needed at all stages of the construction process. During surveying, manual labourers were involved in cutting the forest so as to locate proposed routes; thereafter even greater numbers were needed to clear the entire route, fell and uproot the stumps of trees, cut these into pieces and remove them from the construction sites. Construction itself involved digging and moving large amounts of earth so as to level the ground for the laying of the permanent way. At a time when head portage was the only available means of transport, large numbers of carriers were also required to carry such construction materials as rails, sleepers, timber and cement to the sites. The permanent way when laid, needed to be ballasted in order to prevent erosion and to secure the stability of the line. This required either the construction of quarries by mechanical means or the collection of boulders and stones by hand, which would then be broken into pieces for ballasting. In addition, there were rivers to be bridged, tunnels to be constructed, and workshops, offices and staff accommodation to be erected at principal railway stations. All such work needed large amounts of unskilled manual labour.

But railway construction also required a relatively small number of men with technical skills and semi-skills: surveyors and draughtsmen were needed to record the survey and to draw the relevant maps, engineers

to design and supervise the work, and carpenters, masons, fitters, steel benders and platelayers to undertake construction. However, given that such skills were normally recruited from abroad while manual labour was obtained locally, the chapter will focus principally on recruitment of unskilled workers.

THE LATE 19TH CENTURY LABOUR PROBLEM - AN EXPLANATION

The problem that occupied the minds of Colonial officials was how to obtain the unskilled labour that was needed for the Gold Coast railways. Governor Griffith, for instance, had stressed during the 1880's that such labour would have to be imported.¹ After all, the Colonial authorities were witnesses to the failure of early corporate mining in the western districts as a result of their inability to attract sufficient labour.² Moreover, the Government itself had been confronted directly by the labour problem on several occasions: a hasty attempt to lay a light railway to Kumasi during Sir Garnet Wolsely's military expedition in 1874 was given up on account of labour problems.³ Again, in 1897, 1,120 Mende carriers had to be recruited from Sierre Leone to transport military stores to Ashanti and the Northern Territories, but many of them deserted shortly after arrival while the rest were sent back as "destitutes". The whole cost of this episode amounted to £10,480 excluding rations.⁴

The inability of both the Colonial state and private capital to attract sufficient labour at this time can be explained by several factors not least because of the continued existence of slavery. In pre-colonial Gold Coast, as in other parts of Africa, enslavement of man by man was a common means of mobilising labour. Domestic slavery

and pawning (which was the pledging of one's relative to a creditor as collateral) were said to be so widespread in the nineteenth century Gold Coast that even the Christian missions made use of them: they paid full wages for the slaves while pawns received only a portion of the pay because the rest went to pay for the debt for which they had been pawned.⁵ Indeed, as Wilks points out, slaves were of such crucial importance to the Ashanti economy that the society could hardly exist without the institution.⁶ Not surprisingly, when the British took over in 1874, one of their first actions was to outlaw slavery which they regarded as the primary obstacle to the development of a wage labour force.⁷ Freed slaves were expected to become the future proletariat of the country. However, as Dummett points out, the authorities' desire to abolish slavery was curtailed not only by the lack of any definitive forms of the institution in practice, but also because of the possible high cost of compensation to owners as well as the social consequences of mass emancipation.⁸ Thus, actual enforcement of anti-slavery legislation was mainly limited to the prevention of slave raids for export purposes. Domestic or internal slavery remained largely untouched.

Secondly, the conditions of wage labour were also highly unattractive. As Jeff Crisp has stated, wages were low and the tasks assigned to workers in the mines for instance, were arduous, dirty and dangerous.⁹ In addition, the results of recruitment of workers from West Africa to the Belgian Congo and the Islands of Sao Thome and Fernando Po needs to be stressed. As a consequence of the atrocities committed on such labourers, by the 1890's certain terms, for example "Abrofodzuma" that is to say whitemans job, and "Ubandzuma" or

Government's work, had been devised by the Gold Coast population to describe the dangers of wage employment in general.¹⁰ An additional problem then was the poor reputation of wage employment which was unlikely to attract, for example, established cultivators. Finally, the early days of Colonialism were also days of enlarged labour demands not least because of the expansion in palm oil and rubber production, as well as the nascent cocoa industry.

Thus, it is against this background of the continued existence of domestic slavery, an enlarged labour demand, together with a growing unattractiveness of wage labour, that one must set the Government's strategies, its successes, and its failures to satisfy its railway labour requirement.

RECRUITMENT FOR THE SEKONDI-KUMASI LINE, 1898-1903:

As soon as the construction of the Sekondi-Tarkwa line was set in motion in 1898, the Colonial administration simply advertised for labour. District Commissioners were asked to recruit workers and give them 3d subsistence for each day of their journey to the railway site. On arrival, the worker was to be allowed one day to construct his hut while wages were to be paid at the rate of 1/- per day for men, and between 6d and 9d for boys and women "depending on their value as workers".¹¹ These discriminatory wage levels were not only lower than the Government official rate of 1/3d, but more importantly, the mining companies continued to pay their workers at the official rate. Clearly, the Government was looking for a cheap labour force to build its railways. However, in view of the conditions discussed above, it is not surprising that this labour force did not materialise. By June, 1899,

there were only 600 labourers on the site.¹²

An added factor in the unpopularity of railway work at the time was the ill-treatment of the labourers. Sub-contractors mainly South Africans, Italians and Greeks were engaged to undertake clearing, excavations and other petty contracts. Punishment by flogging and forfeiture of wages was common-place. As the Consulting Engineers reported, the excesses of the sub-contractors was such that many labourers left their employment and, "the railway project as a whole got a bad name amongst the natives."¹³

Significantly, these sub-contractors were the first to complain to the authorities about the labour shortage. They wanted permission to recruit labour themselves, if necessary by force. The administration, however, was dubious about the demand. It argued that it was precisely because of mistreatment of workers by the contractors that working for the railways was unpopular. However, by December, 1899, when there was still no sign of improvement in the labour supply situation, the entire European construction staff went on strike, and demanded that Government should intervene positively in the labour problem.¹⁴

The immediate official response to these problems can be explained in terms of the racial prejudice that existed at the time. Africans were said to be unwilling to work, or lazy and therefore Chinese coolies were to be brought in to teach them the virtue of work. "The Fanti and other tribes", the Resident Engineer reported, "were indolent, slow, and possessed but little energy",¹⁵ adding that nothing short of large scale importation of labour from China or India would ensure the success

of the railways. The case for "eastern" indentured labour was not new. Governor Maxwell had stated in 1897 that: "no real progress will be made in the development of this Colony, until a more energetic race than that which now inhabits it is at work here."¹⁶ Although Maxwell secured Colonial Office approval for the importation of 800 indentured workers from the Straits Settlement, the scheme was dropped because of the lack of regular steamship service between West Africa and the East. But the failures of the railways to attract labour, together with the recent authorisation of an additional 124 miles from Tarkwa to Kumasi, meant that official interest in Chinese labour revived. Thus, Acting Governor, Hodgson, after visiting the construction site in January 1900, asked the Colonial Office to reconsider the proposal to import Chinese coolies. However, the proposal was turned down by the Crown Agents on the grounds that they were as susceptible to tropical diseases as Europeans.¹⁷

In default of imported Chinese labour, the Colonial Government turned to the traditional Chiefs as agents for the recruitment of indigenous labour. Since the establishment of Colonial rule in the 1870's, the authorities had increasingly relied on the traditional rulers to supply their labour needs. Administrative and trade roads, for instance, were constructed by communal labour, in return for which the Chiefs were paid stipends. The earliest attempts to recruit railway labour through the Chiefs appears however, to have been confined to the south-eastern parts of the Gold Coast Colony. Sir Mathew Nathan (the Governor) launched the scheme in February 1900, by personally appealing to the Kings of Krobo, Akwapim and Accra to provide labour.¹⁸

Thereafter, circulars were sent to all District Commissioners authorising them to pay 5/- per head to the Chiefs for each worker they supplied,¹⁹ and a Special Travelling Commissioner was appointed to the Eastern Province to co-ordinate recruitment.²⁰ On this occasion, it was obvious that the authorities were prepared to tolerate a degree of coercion. One official suggested that a mere circular would produce limited response and therefore specific quotas should be given to each District Commissioner on the basis of population. Cape Coast, the Headquarters of the Transport Department, which recruited carriers for government stores, was to be exempted.²¹

Although there was some response, it soon became evident that this source of supply was still far from adequate. By the end of 1901, only 1,995 of the estimated 4,000 target had been realised as follows:-

Chief Ababio of Accra	972
King Tackie of Accra	360
Lt. F.B. Henderson, D.C. Volta	315
D.C. Keta	322
D.C. Ada	20
Chief Vanderpuye, Accra	6
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Nearly one-half of the recruits were supplied by Chief Ababio alone. That these workers should come mainly from the south-eastern coastal districts of the Colony is not surprising. The conquest of Ashanti and the Northern Territories was far from complete and therefore any organised recruitment from there was out of the question. At the same time, the Western Province, where the railway was being built was also the centre of the mining industry and as such the region where demand

from other sources of employment was most acute. On the other hand, the Eastern Province, particularly the grassland districts of Accra and the Volta, had relatively low levels of commercial activity, and consequently labour was likely to be obtained much more easily there. Moreover, in the absence of well-constructed roads, sea communication offered the most feasible means of transporting labour on a large scale from one part of the country to another. Thus these workers, who were mainly recruited along the coastal strip were first sent to the nearest coastal District Offices at Ketta, Addah and Accra where they entered into indentured service. This included a six month contract for which the Chiefs were paid 5/- for each labourer supplied and a promise of a further 5/- for each worker who stayed on for an extra six months. The workers themselves were organised into "gangs" of 20-30 men, each group consisting of people from the same village or supplied by the same Chiefs. The Chiefs appointed their own "headmen" for the gangs who were responsible for discipline and these were promised between 1/6 and 2/6 per day "depending on good work."²³ From the coastal District Offices, the labourers were then despatched to Sekondi by sea, from where they were marched to the construction sites.

Unfortunately, railway records provide little insight into the social background of these early recruits, so that it is impossible to perceive the extent to which there may have been elements of slavery or other forms of "unfree" labour among the workers. This is probably not surprising because, as Anne Phillips points out, the use of slave labour on public works in West Africa was such a politically-sensitive issue that the Colonial Office preferred to keep a "judicious silence" over such matters.²⁴ Indeed, the Lagos administration resolved its

railway labour problem earlier on in 1895-97 by simply going to the slave markets to "redeem" slaves - it paid the market price of £1 to £2 for the slaves, kept them on the construction works, and deducted the redemption fee from their wages and subsequently freed them.²⁵ But because of Anti-Slavery Societies' accusations that Colonial Governments were openly participating in slavery, Governors who wrote to London for advice on the use of slave labour were often reprimanded for bringing such matters to the notice of the Colonial Office, one official remarking that, "it is not an issue on which it is advisable to say much."²⁶ In short, the attitude of the Gold Coast administration may have been to pursue a middle course: to make the maximum use of the existing labour force whether free or unfree, so long as it was not seen to be involved directly in the recruitment process. The powers of the traditional Chiefs would therefore be strengthened to enable them to supply labour to the Government railways.

In addition to recruitment through the Chiefs, the administration experimented with another type of organised recruitment. Under the scheme, introduced in 1901, the Transport Department, which had hitherto recruited carriers for the conveyance of government stores, was converted into a Labour Bureau with monopsonistic powers; the department was to recruit labour which would in turn be supplied to both public and private employers at a commission. Although the main aim was to ensure a cheap and uniform wage rate, the mining companies opposed the scheme on the grounds that the government could turn it to its future advantage by becoming the sole supplier of labour.²⁷ Although the Bureau succeeded in obtaining 700 workers mainly from the central districts for the

railways by early 1902, the ordinance backing it never became a law due to opposition from the mines.²⁸ Thus, the attempt to establish a Labour Bureau, like recruitment through the Chiefs, failed to meet the demands of the railways.

The failure to obtain adequate labour for the Sekondi-Tarkwa line is evidenced by the slow progress of construction. As at March 1901 - that is, 2½ years after construction had commenced, - only 25 miles of line had been constructed. By this time, the proposed extension to Kumasi had so increased the scale of the project that the government was compelled to look further afield for labour - to the other West African Colonies. A rudimentary "wage labour" force had existed in all the West African coastal towns since the mid-nineteenth century. Whereas relatively intense economic activity, especially in mining and cocoa farming, had led to labour shortages in the Gold Coast by the turn of the century, labour continued to be fairly abundant in Sierra Leone and Lagos partly because by 1901, both Colonies had completed the first sections of their railway projects. In the case of Lagos where the authorities relied on "redeemed" slaves for railway construction, for instance, such workers must have been thrown onto the labour market. The Gold Coast administration therefore turned to these other West African Colonies for recruitment. In June 1901, the Crown Agents appointed Mr Christopher Hill, a railway engineer, as Special Recruitment Agent, to be stationed at Lagos for six months. Although the Lagos administration was to procure the workers, Hill was responsible for the registration and transport of the labourers to the Gold Coast. Each worker entered into an indentured contract for 1 year plus return passage, while the Lagos administration

charged £1 per each person so recruited.²⁹ A similar approach to the Sierra Leone administration was initially rebuffed. It was argued that recruitment would adversely affect the recently instituted Hut Tax whose success depended upon palm oil and rice production.³⁰ It was only with the intervention of the Secretary of State, Joseph Chamberlain that the Sierra Leonean authorities agreed to supply 1,000 workers.³¹ Along the Kruu coast of Liberia which lay outside the British sphere of influence a private German shipping firm, Walchers-Helm was also commissioned to recruit workers for the railways.³²

The efforts at external recruitment, together with the collapse of Ashanti resistance, brought about a dramatic change in the labour situation. In December 1901, there were 4,500 workers on the project. By March 1902, the figure had reached 8,584, and in May it attained a peak of 16,000.³³ At that date, organised recruitment stopped and labour supply ceased to be a problem until the work was finished the following year. One significant point about the labour on the Sekondi-Farkwa-Kumasi line was the widespread use of indentured workers. Out of the 16,000 workers on the project in May 1902, as many as 11,626, or 72 per cent of the total, were indentured for varying periods of between 6 and 12 months. This included 7,000 from Lagos, 1,000 from Sierra Leone, 271 from Liberia and 3,355 from Gold Coast recruited mainly from the south-eastern districts. On the other hand, 4,374 or 28 per cent of the work force, were volunteers who were recruited mainly from the vicinity of the railway. All forms of recruitment now produced more workers, though the main group comprised immigrants from Lagos.

Through the use of administrative powers, alliances with traditional Chiefs, and particularly indentured recruitment of foreign

workers, the authorities seemed, then, to have overcome the labour supply problem. However, the labour force was far from "stable". There was a rapid turn over due to frequent desertions mainly among the Gold Coast workers. As the Chief Accountant reported: "it is always difficult to state the exact number of men at work as there is always considerable fluctuation going on."³⁴ The Accra and Ketta "boys" proved the most difficult to control. These workers were given an advance of 20/- (later changed to a "gratuity" of 7/6) on arrival, but in many cases the workers either changed their names or simply disappeared from the work and "scarcely 10 per cent of them carry out the term of their contracts."³⁵

The persistent Ashanti uprisings particularly between 1899 and 1901 was partly responsible for the high turn-over in labour as this necessitated railway workers being drafted from time to time as carriers for troops. Nevertheless, the poor conditions of railway work appears to be the main cause of the high turn-over. Wages were very low. In fact, when Governor Nathan approached the Accra Chiefs in 1900 about the labour problem, the Chiefs pointed out that their people were unwilling to travel so far away from home only to be paid 1/- per day, which was less than the market rate.³⁶ Instead of raising wages, however, the Government decided to "bribe" the Chiefs by offering them "headmoneys" for each worker supplied, an offer which the Chiefs not surprisingly accepted with alacrity.

Another reason for the instability in the work force was the lack of adequate logistic and administrative organisation. This was complicated by the fact that railway construction involved constant transfer of work camps from one place to another as the work progressed.

For instance, the one day period allowed to new recruits to erect their huts was simply inadequate for the provision of a safe place of habitation. Conversely, mining work, although generally considered to be dangerous, offered permanent settlement and therefore had an advantage in attracting a work force. Moreover, there were problems about the food supply for the railway work camps. Although the Crown Agents procured rations - mainly rice and tinned fish - supplies were sporadic and distribution highly inefficient. Some workers complained about the unfamiliarity of the food. Finally, the workers resented the system of delayed payment of wages. Other than monthly rations, wages were never paid until the expiry of workers' contracts and gangs were collectively penalised by forfeiture of wages for individual desertions of their members.³⁷ All these control measures were designed to ensure a stable work force, but ironically they only worsened the already deplorable conditions of railway labour and lessened its potential attractiveness.

RECRUITMENT FOR RAILWAYS AND LIGHTERAGE PORTS, 1905-1918:

As far as the supply of manual workers for railway and port construction was concerned, the period 1905 to 1918 was relatively easier than the preceding years. The expansion of British jurisdiction over Ashanti and the Northern Territories, together with the collapse of the gold boom, both eased and expanded the Gold Coast labour market. Moreover, there were no large scale construction works during this period: the eastern line which started in 1908 was built in a piecemeal way, so that by the time construction was suspended in 1915, only 65 miles had been laid. This was in addition to the 18 mile Parkwa-Prestea branch line (1908-1911) and the development of lighterage ports at Accra and

Sekondi. Such a reduced level of demand for railway and harbour construction, however, occurred at a time when the overall requirements of the Colony for labour was increasing, due principally to the expansion in the established mines and the cocoa industry. Consequently, renewed Government intervention in the labour market was inevitable.

Significantly, the renewed intervention came at the instigation of the mining companies, which approached the authorities in 1905 for permission to recruit indentured workers from the Northern Territories.³⁸ Watherston, the Chief Commissioner of the region, was enthusiastic about the scheme as it offered prospects of cash earnings from the south being invested in "commercial agriculture" in the north.³⁹ The Government however, was still committed to official control of the recruitment process - first, because direct recruitment by the mines was likely to result in competitive wages which was contrary to the policy of keeping wages down, and second, because uncontrolled movement of labour on a large scale was considered likely to undermine the position of the traditional Chiefs and hence the basis of Colonial rule.⁴⁰ Thus, the labour system was increasingly regarded as a means of boosting the Chiefs' authority. Under the northern recruitment scheme therefore, the mines made their requests to the Government, quotas of which were then allocated to the various District Commissioners in the region, who in turn approached the Chiefs for labour. As usual, headmoney was paid for each worker supplied. Recruitment started in 1907, when the first group of 271 Northern labourers arrived at the Tarkwa Mines.⁴¹ Although the scheme had to be temporarily suspended in 1910 due to organisational problems, migrant labourers from the North, including the

French territories, soon came to form a significant element in the mines (especially in underground work),⁴² and in cocoa farming.⁴³

As Crisp points out, such workers constituted the largest regional group in the mine labour force by the War years.⁴⁴

But how did the authorities obtain workers for railway and port development at this time? When Mr W. Tower was appointed Resident Engineer in 1908 to oversee the construction of the Tarkwa-Prestea branch line, he visited the Colony and described the labour problem as "acute". The Crown Agents then instructed Mr Migeod, the Transport Officer to recruit 300-400 workers from Sierra Leone for the project.⁴⁵ By October the same year, these Mendi labourers who were indentured for 12 months plus return passage had begun to arrive.⁴⁶ Such workers, however, were to form only a small proportion of the overall work-force. Out of a total of 1,500 workers on the Tarkwa-Prestea line in June, 1909, only 300 or 20 per cent were indentured labourers (from Sierra Leone) while 1,200 or 80 per cent were voluntary labourers recruited locally.⁴⁷ There were no northern recruits at all on the project. Although exact figures are not available, subsequent reports indicate that labour was generally available. In fact, by the time construction was completed in 1911, large numbers of workers from the Prestea branch line were said to have migrated on their own accord to the eastern line, the construction of which was proceeding simultaneously.⁴⁸

Clearly, there was a favourable response to railway labour opportunities, despite the general manpower shortages in the country. This was mainly because of changes in mining conditions, not least because of a move from surface to deep-level mining at this time. The

established mines, which survived the speculative gold rush of the turn of the century, took advantage of the availability of rail transport to install the heavy machinery required for deep-level mining. Consequently the bulk of mine work now available consisted of the underground work which was widely dreaded by local men.⁴⁹ Moreover, to offset the extra labour costs in respect of "headmoneys" charged on northern recruits and thereby minimise working costs, the majority of the mines slashed their wages from 1/3 official rate to 1/- per day "for full sized natives."⁵⁰ This meant that the rates for railway labour which now stood at 1/- to 1/3 "depending on one's value as a worker" became more attractive than those in the mines. Not surprisingly, the railways attracted labour from the mines. For instance, in 1909, the Prestea Mine accused the railway of "poaching" their workers and demanded that there should be an embargo on recruitment for railway construction within a radius of forty miles of all mines and that a maximum wage of 9d a day should be paid for railway labour.⁵¹ Clearly, the frustration of the Prestea Mine illustrates the extent to which mine labour was now considered to be less attractive than that of the railways.

On the eastern line, the authorities did recruit Northern indentured workers for construction work. As soon as Mr Murphy was awarded the 40 mile Accra-Mangoase contract in 1908, he approached the Government for 300 men from the Northern Territories. By April 1909, 400 such workers, who were indentured for 12 months, had arrived on the project.⁵² Nevertheless, as in the case of the Prestea branch line, voluntary, non-contract workers constituted the majority of the labour force on the project. Of the 3,000 labourers on the Accra-Mangoase section in June 1909, only 360 or 12 per cent were indentured (from the

Northern Territories) while 2,640 or 88 per cent were voluntary workers.⁵³ A "market" response to railway labour opportunities was perhaps most pronounced on this section of the railway system. Here, construction was undertaken by a private contractor who was more sensitive to market conditions than was government. Higher wages - 1/3d - 1/6d - than the official rate were offered for voluntary labour, though recruits from the North received 1/-.⁵⁴ Not surprisingly Murphy's project experienced little labour problems. Throughout the construction of this section, large numbers of migrants, especially from Togoland, who were in search of employment were regularly intercepted near Accra and employed for the railways.⁵⁵ Although these migrants, particularly from the German side of the border, were said to have been either escaping from forced labour, or in search of wages to pay taxes, the obvious financial incentives on the railways also accounted for the success of labour recruitment. This is further illustrated by the fact that there was a higher incidence of desertion among the northern indentured workers. Of the 400 recruited in 1908, only "few" were reckoned to have completed their contracts.⁵⁶ These northern workers who were in fact "conscripts" found themselves not only working side by side with southern voluntary labourers who were paid at a higher rate, but in addition the southern labourer received his wages on the spot, whereas the northern counterpart was merely fed and received his accumulated wages on his return home.

On the 25 mile Mangoase-Tafo extension (1912-1915), labour supply continued to be favourable to the railways. When the work started under Mr Cozens-Hardy, labour was simply transferred from the previous section to the new project so that "there is no demand for organised

recruitment of labour ..."⁵⁷ At the same time the development of lighterage ports at Accra and Sekondi were undertaken mainly in an ad hoc fashion with the result that the need for a very large labour force never arose. In 1909 for instance, only 230 labourers were employed on the Accra harbour works with another 350 at Sekondi, none of whom were indentured.⁵⁸ Thus by the time railway and port construction works were suspended in 1914 due to the War, indentured labour no longer constituted a significant proportion of employees. As the Governor reported in that year, "many workers now find railway construction best suited to their convenience or inclination"⁵⁹ - indicating the relative attractiveness of railway labour by this time.

Clearly, by the War years, a regional division of employment had emerged: northern contract workers were channelled mainly into the mines, while southern voluntary labourers were employed on the railways. How far this regional division of labour, particularly the emerging "free" labour market in the south, could survive the post-war economic reconstruction is the issue to which we now turn.

THE POST-WAR LABOUR PROBLEMS:

The armistice of 1918 ushered in not only the rehabilitation of the existing railway system, but also a general economic expansion, with the result that the question of labour once again came into sharper focus in official discussions. When Governor Guggisberg introduced his Ten Year Development Plan in 1919, he estimated that 27,000 workers would be required immediately for the proposed public works alone.⁶⁰ Reports emanating from the railway projects already underway, however, were grim. On the Sekondi-Kumasi realignment, it was reported that

"local labour could not be induced to take up the work on any terms at all",⁶¹ and on the Tafo-Kumasi extension, the engineers were unable to commence work because no more than 150 labourers were available at the site.⁶² Clearly, at a time of new expansionary plans, there was an imminent labour crisis.

The influenza epidemic of 1918, which claimed more than 100,000 lives in the Colony, Ashanti and the Northern Territories,⁶³ partly accounts for the general post-war labour shortages. Nevertheless, it was equally true that the railways were unable to attract labour because of the competition from cocoa farming. The rapid expansion of cocoa cultivation, together with prevailing high world market prices, enabled cocoa farmers to outbid both Government and the mining companies in the labour market. Guggisberg later admitted that some cocoa labourers were earning up to 10/- per day, plus food and accommodation, as against the official rate which remained pegged at 1/3.⁶⁴ Clearly, wage levels on the railway were no longer realistic, more especially in view of war-time and post-war inflationary pressures. The problem was further complicated by the shortage of metal coins as a result of the conversion of the Royal Mint to armament production during the War. Although bank notes were issued throughout the war, they were highly unpopular among Africans. Consequently, with the availability of coins after the war, the issue of notes was abandoned in favour of a gradual redemption of all paper money at a discount. Both the Government and mining firms disposed of their reserve notes through the payment of wages to their workers and such labourers often had to change these notes for coins from "brokers" at between 50-75 per cent of their

face value.⁶⁵ On the other hand, cocoa farmers who had avoided the paper money from the start had large reserves of silver coins in savings and this was more attractive for labour.

How then did the authorities respond to the post-war labour crisis? The immediate response was to reassert the powers of the Chiefs in the mobilisation of labour. In November, 1919, the Governor called a Labour Conference of public work officials at which he announced new proposals for labour recruitment. Of the 27,000 workers required, 13,000 were to be provided by the Colony and Ashanti through unpaid communal labour, since "the railway projects will benefit them most."⁶⁶ Communal forced labour, by which all abled bodied people provided unpaid work on public projects, was nothing new in the Colony. What was new in the 1920's was that for the first time the system was being used for railway construction. The aim was to enable the Government to overcome the labour supply problem while placing the onus of recruitment on the Chiefs. Presumably, it was considered that a few days unpaid work on the railways could easily be fitted into an individuals normal routine of subsistence farming and/or cash-cropping of cocoa. The scheme had the added attraction of not requiring railway work camps and the need for rationing.

In the Northern Territories and the Volta (including the newly acquired mandated districts) the Government remained committed to official control over the labour market. Attempts by the Mines to recruit indentured workers directly from those regions were to be turned down. These were years of concern about the high death rates in the mines, and the Government seized upon this issue to counter the perennial

demands of the mining companies for freedom of recruitment.⁶⁷

As there was still no professional labour recruiting agency in the country, the Governor proposed to establish a Central Labour Bureau which would co-ordinate all labour recruiting activities. At the Provincial and local levels, the Chiefs, District Commissioners and Public Works Department officials would form sub-committees to which applicants for labour would direct their requests. The functions of these sub-committees were:

1. To organise systematic propoganda campaigns to explain to the people the importance of government works to the country;
2. to obtain information regarding the number of labourers each Chief could obtain for work both in his stool and outside;
3. to ensure that markets for sale of foöd stuffs to workers were provided; and
4. to determine the length of engagement for each gang, and to inspect the living conditions in all work camps.⁶⁸

Despite these elaborate arrangements, the scheme floundered. Mobilisation of labour for railways and harbours was conditioned by the availability of alternative, more lucrative forms of employment, and the ability of the Chiefs to influence their subjects. Because of the availability of mining and cocoa work, it became virtually impossible for the Chiefs to recruit labour in the western districts to work on the Sekondi-Kumasi reconstruction, "and those recruited and put to work deserted after a few days ... practically all the work had to be carried out by (northern) indentured labour."⁶⁹

Although communal labour was used more widely on the Tafo-Kumasi extension, it met with limited success. Despite the appointment of a Special Travelling Commissioner to oversee labour recruitment in Ashanti, by 1922 the scheme succeeded in producing no more than an average of 450 workers per day, "who showed little aptitude for labour on construction."⁷⁰ They were described as being "mostly local and very poor quality ... being available during the non-farming season, whilst scarce at the cocoa season."⁷¹ Clearly, Ashanti's entry into large scale cocoa production at this time, partly explains the failure of the communal labour system on the railways.

In addition to this problem, the Chiefs in the Colony and Ashanti generally found themselves increasingly losing political control over their subjects. This was caused not only by the greater number of people entering the money economy, but also by the democracy inherent in African political institutions. Although the Chiefs in the southern Gold Coast were mainly hereditary, they could be thrown out of office by the "commoners", who had a defined role in the political process.⁷² As Jarle Simensen points out, the growth of the "Asafos" (to which the commoners belonged) from 1913 onwards resulted in "the loss of prestige for Chiefs."⁷³ As a consequence of the Asafos' political power to initiate the de-stoolment of unpopular Chiefs, no Chief could afford to force his people to enlist for government work. Thus in 1920, the District Commissioner of Addah reported that, in spite of his efforts to mobilise labour for railway construction, he had found no Chief willing because of the political crisis - there was no permanent Chief in the town and the acting Chief was not popular. The people were in the process of selecting a new Chief, and the sub-Chiefs were reluctant to

associate themselves with the new labour policy.⁷⁴ In the Kwahu districts (through which the Tafo-Kumasi extension passed) recruitment of workers for the railways had even resulted in an open conflict between the Asafos and the Paramount Chiefs. As a Kwahu correspondent of the "Gold Coast Leader" reported: "all the permanent Chiefs hold their posts mechanically, fearing the populace, and expecting de-stoolment, so that aristocracy is giving way to democracy."⁷⁵

In the districts where the Asafo organisations were weak the Chiefs were more successful in mobilising communal labour. In Akyem Abuakwa for instance, Sir Nana Ofori Attah (who was also a member of the Legislative Council), promised 3,000 men on the average per day, and within a month had already supplied 1,000.⁷⁶ Ofori Attah's success was due to the weakness of the Asafo in Akyem. Already in 1918 the Asafo movement had attempted to de-stool him (mainly as a result of his role in conscription during the War) but with the help of the Government, this attempt was foiled,⁷⁷ thus leaving the movement in a demoralised position. In short, the spread of the cash economy in the south together with the growth of mass political consciousness seemed to tip the balance of power away from the Chiefs, and as we shall see later, their leadership role, at least in the mobilisation of labour, was to be superseded by the new African educated elite. However, before examining the role of the would-be African capitalists in the recruitment of workers for the central railway construction (1924-27) we shall first of all consider the nature of the Takoradi harbour labour force.

The recruitment of workers for the construction of Takoradi Harbour presented different problems. Unlike railways, the harbour project was

located in one particular spot and it was therefore not feasible to adopt the communal labour system. Not surprisingly, construction depended exclusively on wage/indentured labour. Although 7,000 unskilled labourers were originally earmarked for the scheme, the scaling-down of the project, together with the introduction of labour-saving machinery meant that only an average of 5,000 workers were to be required.⁷⁸ Despite this, hardly more than half that number were available at one time. In December 1922, there were 2,604 unskilled workers,⁷⁹ by March 1923, there were 2,908⁸⁰ and in April 1924 there were 1,860.⁸¹ Indeed, it was partly the difficulty of obtaining labour for the Takoradi project that led Guggisberg to abandon the idea of a railway link to the North.

Table 1 indicates the regional break-down of the labour force on the Takoradi Harbour Works in March 1923. Several significant points are revealed. Of the 2,908 workers, 910 or 31 per cent were recruited from outside the Gold Coast (40 from Sierra Leone, 440 from Lagos, and 60 from Liberia); 840 or 29 per cent were from the Northern Territories, while the remaining 1,158 or 39 per cent were from the Colony and Ashanti.

TABLE 5.1

TAKORADI HARBOUR WORKS, LABOUR RETURNS, MARCH 1923

<u>Source of Labour</u>	<u>Unskilled</u>	<u>Indentured as %</u>	<u>Skilled</u>
	of unskilled labour		
"Foreign" i.e. Lagos, Sierra Leone etc.	910	89%	111
Colony & Ashanti	1158*	54%	761
Northern Territories	840	96%	60
Total	2908	77%	932

* Includes large numbers of children and women.

Source: Governor to Secretary of State, 26 May, 1923, P.R.O: C.O. 96/638

However, unlike the pre-war pattern, the "southern" work force was now predominantly recruited from the western districts and Ashanti, rather than the south-eastern corner of the Gold Coast Colony. Thus 371 were from Ashanti, 450 Fanti, 265 Ahanta, as against 30 from Ketta and 20 from Accra.⁸² Although no definitive explanation for this trend is possible it is highly plausible that the Sekondi-Kumasi rail link may have facilitated the movement of labour from the western districts to Takoradi, whereas a prospective labourer travelling by foot from the south-eastern districts may well have been absorbed by the growing cocoa industry.

It also becomes clear that the majority of unskilled workers at Takoradi were indentured:- 54 per cent of workers recruited from the Colony and Ashanti, 89 per cent of the "foreign" recruits, and as much as 96 per cent of those from the Northern Territories. But despite the relatively low level of indentured workers from the Colony and Ashanti, the pattern clearly shows a significant reversal of the pre-war trend towards a growing free labour market in the south. Thus, the renewed government intervention in the labour market after the war seems to have had a negative impact on the emergent voluntary labour employed on public work projects.

Finally, Table 5.1 provides, for the first time, evidence of the presence of skilled African construction workers. These were employed predominantly as carpenters and masons and the majority came from the Colony and Ashanti. Of the 932 skilled workers on the Takoradi project in 1923, 761 were from the southern Gold Coast (120 from Accra, 22 from Ahanta, 40 from Ketta, 340 Fantis and 239 Ashantis). 111 were "foreign"

employees (72 from Sierra Leone, 31 from Lagos and 8 from Liberia). On the other hand, only 60 of the African skilled workers were from the Northern Territories. This is hardly surprising, in view of the fact that the limited opportunities for skills acquisition that existed for Africans were confined to the Colony and Ashanti, whereas the Northern Territories were regarded as a "backward" region suitable for supplying manual labour.

The final project to be undertaken during the twenties was the construction of the Central Province line, and here too entirely new labour arrangements were adopted. In the aftermath of the unsuccessful communal labour experiment on the Pafo-Kumasi extension, the authorities turned to indigenous capitalists, or would be capitalists for the recruitment and supervision of labour. Under the new scheme, known as the "contract" system, Africans who could read and write, had had long experience of work on the railways, and were able to raise a "gang" of workers of between 20 and 30 men on their own accord, were awarded contracts.⁸³ The Railways had used the petty contract system since 1898 but only for minor works such as clearing and excavation, the amount of individual contracts for Africans ranging from £1 to £30.⁸⁴ What was new about the contract system during the twenties was that other than the construction of the bridge over the Birim River which was awarded to a British sub-contractor, all the other major works on the central line from station building, turntables, plate-laying and ballasting were awarded to African "contractors" on a piece-meal basis. Thus, the system shifted the responsibility of recruiting labour away from the Chiefs to the new African elite who turned largely to the

Northern Territories for recruitment "with a small percentage of voluntary labour coming from Nigeria."⁸⁵ The new method was said to have been so successful that it resulted in a 20 per cent reduction in the estimated cost of earthworks. However, since there are no statistics regarding the composition of the labour force on the Central Province Railway, the precise role of this novel arrangement cannot be properly established.

CONCLUSION

The construction of the railway and harbours constituted a major, large scale demand for manual labour in the Gold Coast. Throughout the three decades before 1919, the determining influences on aggregate labour supply to the railways were wage levels and the existence of alternative avenues for cash earnings.

During the earliest phase of construction (1898-1903), the railways lost out to the mining companies because labour conditions were considered to be more attractive in the mines. The authorities cast around for a solution to the labour supply problem, and various proposals emerged - from the classical solution of the importation of Chinese and Indian coolies, to turning liberated domestic slaves into a wage earning labour force. At the end of the day, it was the recruitment of indentured workers from other parts of West Africa and the use of Chiefs as local recruitment agents which ensured the success of the Sekondi-Kumasi construction.

During the second constructional phase (1905-1918), the balance shifted in favour of the railways. As a consequence of

technological changes in the mines, particularly underground or deep-level mining, working in the mines was now considered by local men to be more "dangerous" than railway construction work. While the mining companies began to look increasingly towards the "remote" north for the recruitment of indentured mine workers, the needs of the railways by contrast, were largely met from emergent free or voluntary wage labourers in the Gold Coast Colony itself.

During the twenties, cocoa farming became a major competitor for labour, at a time of static wage levels on both the railways and the mines. Consequently, the Colonial Authorities could no longer rely on voluntary labour for public work projects. Instead of improving wages and employment conditions on the railways, the Government gave a new boost to the powers of the Chiefs, so as to mobilise their subjects for forced communal labour. As for the Chiefs this particular period was to mark a significant turning point in their traditional leadership role. The spread of the cash economy - the availability of mass imported European goods and knowledge of more lucrative employment opportunities - resulted in mass resistance to the forced labour policy at the local level, which threatened to undermine the traditional position of the Chiefs. But whether this is to be taken as evidence of the fact that the "era of Chiefs" was coming to a close in the Gold Coast is still open to question. What can be said is that two decades of railway construction and its attendant changes had led to the emergence of a new African elite or would-be capitalists, close on the heels of the Chiefs, and it was to this group that the authorities turned for the recruitment and supervision of manual labour during the final phase

of the railway project.

As to the overall effect on internal labour markets, it certainly amounted to a major "shock" to African communities with virtually no previous experience of industrial labour. Nevertheless, other than a small number of construction workers who joined the permanent labour force on the open lines, railway construction by its nature required casual workers. Consequently, people worked only for short periods and then returned to the village. Railway construction did not directly create a wage earning labour force, or proletariat. Nonetheless, the experience of railway construction work may have been for some a small stepping stone towards wage employment outside the agricultural sector, as some construction workers may subsequently have taken up employment elsewhere (such as with the mining companies or imports-exports trading firms).

Finally, because the railway technology was developed, planned and introduced wholesale from Britain into the Gold Coast, all the construction skills had to be imported. Thus, the tasks performed by the ordinary African was basically simple - carrying, felling trees, excavation, etc. - which were very little different from their normal duties at home. Consequently, any technical transfer from railway construction would have been at relatively low level. But again, one cannot be certain that workers did not experience a broadening of their technical skills. The introduction of the handling of new tools and materials, for example, may have widened some workers' horizons.

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CHAPTER 6

THE ACQUISITION OF RAILWAY AND HARBOUR LAND AND COLONIAL LAND POLICY

INTRODUCTION: GENERAL PROBLEMS OF LAND ACQUISITION IN RAILWAY CONSTRUCTION

Writing about the American railways, John Stover noted that few of the lines were projected or constructed without opposition from a variety of landed interest groups.¹ This observation does not apply to America alone, for it is true of railway construction all over the world. Few railways, whether state-owned or privately-owned, were constructed without some sort of state intervention to secure land for the schemes. As transport agents, railways operated over very long distances and influenced property values on a wide front. This made the acquisition of land for such transport projects more problematic than most ordinary industrial or agricultural enterprises. The construction of permanent ways, for instance, requiring strips of land of about 20 yards in width over very long distances brings in its wake the disruption of virgin land, forests, farms, waterways and townships. At principal railway stations and harbour sites, especially when located in villages, towns or cities, the additional space needed for the construction of stations, warehouses, depots, workshops, sidings and marshalling yards necessarily involved a further interference with property and general community life. On the other hand, by lowering transportation costs, railways and harbours generally bestow an enhanced value on land and property. In the British case, it is true, railways, by virtue of their incessant noise and the physical danger they posed

to both human life and property, apparently had the tendency to depress urban (mainly residential) property values.² Nevertheless, when as in the case of the Gold Coast, railways were being constructed through a relatively undeveloped territory, land values were more likely to rise. As Chisholm has argued, admittedly with some exaggeration, "if you drive a road or railway through a cultivable area you automatically stimulate economic development."³ Consequently an additional problem arises as to who benefits from the enhanced value of land which follows from railway investment: should the gains accrue to the owners of the railways or should the owners of the land through whose property the lines were constructed reap such benefits? For the above reasons railway schemes inevitably affect several vested property interests. A major prerequisite for the resolution of such problems would appear to lie in the existence of clearly defined land laws and conditions of alienation to railway enterprises.

In Britain, where railway promotion sometimes experienced long delays through opposition from landowners, Parliament intervened by granting statutory powers to railway companies to acquire any property which lay on their chosen routes by compulsory purchase. The law which also provided for a generous band of land on either side of the track, called "The Limits of Deviation", afforded the railway companies excess land which they disposed of to the public, and thereby recouped some of their promotional expenditures.⁴ In the United States, government intervened through the Land Grant System under which railway companies were allocated large tracks of land alongside their routes. This made the companies not only transportation agents but also significant owners of land most of which was exempted from taxation.⁵ In addition

to providing easy access to land for construction, the land grants also provided ready credit to the railway companies during the gestation periods of their projects. "Most railroads obtaining grants", Stover noted, "mortgaged their land long before they completed final certification with the government, obtained the patents to their land, or sold it on long term credit to settlers."⁶

In Colonial Africa, the question of land titles was equally important for railway construction. "Land", Edmund Morel observed, "was the key problem of European rule in tropical Africa."⁷ Morel defined the options facing the British administration as two: It could adopt either a policy of dispossessing Africans of their lands in the interest of European capitalism, or a policy of preserving African land rights which would increase the Africans productive capacity. In East and Central Africa, where the British pursued the former option by declaring Crown Rights over the most fertile and arable parts of the land,⁸ railways, whether state constructed or privately owned, were simply pushed through "public" land. The result was that opposition to railway construction from landed interests was minimal. Moreover, through a policy of encouraging white settlements in these areas, the Colonial governments allocated large tracts of land alongside the railways to Europeans for large scale commercial enterprises, which in turn provided additional incentives for railway investment. In West Africa, however, a radically different situation obtained. Here the failure of the British authorities to formulate clearly defined land laws, and especially to distinguish between "public" land and private land meant that railways in the Gold Coast, and indeed the whole of British West Africa, could not be built by allocating public land to

railway companies - as in American Land Grant System - nor could government assign large areas of public land alongside railways to new enterprises - as happened in East and Central Africa. Hence in the Gold Coast the perennial problem of land acquisition assumed particular significance. This chapter examines the nature of Colonial land policy and its implications for the acquisition of land for railway and harbour works.

THE GOLD COAST "LAND QUESTION":

In the Gold Coast, the "problem" of land first appeared as a problem of guaranteeing rights for private capital. With rumours of gold, and prospects for rich rubber and timber developments in the aftermath of Sir Garnet Wolsely's expedition to Ashanti, British firms soon began to push beyond the trading stations through which pre-colonial trade operated, and purchased land for mining, and to a lesser extent, agriculture.⁹ In the absence of private ownership, under customary law, prospective investors found it hard to establish secure rights over the land. Not surprisingly, litigation and disputes over land titles became rampant.¹⁰

One widely favoured solution in the early 1890's was for the state to appropriate the land, and set itself up as landlord to new investors. In addition to guaranteeing security of tenure to European firms, the government would also benefit from land revenues. Thus in 1899, Governor Griffith proposed that Crown Rights be established over all unoccupied land in the Colony, "preserving existing individual rights for the lifetime of their holders and devoting revenue arising from the

sale or lease to the administration of the country."¹¹ Although Lord Knutsford, the Secretary of State, was enthusiastic about the proposal, he favoured a policy of "cautious consideration" as the changes would amount to a "social revolution."¹²

Consequently, it was not until 1894 that a version of the proposed land reforms was put forward in the Crown Lands Bill (1894) which would have vested all so-called waste lands in the British Crown.¹³ The Bill, however, triggered off stiff opposition, which was to earn the Gold Coast the reputation of the "storm centre of the British West African land problem."¹⁴ An alliance of Chiefs and African lawyers (who also enjoyed some of the "irregular profits" from land transactions) was formed to resist the legislation.¹⁵ Moreover, European mine owners and merchant houses whose interests the legislation sought to protect also objected to the Bill because of their fears of excessive control by officialdom, more especially the section which required them to pay royalties. Not surprisingly, nothing immediately came of the Crown Lands Bill.

The revival of the land issue awaited the arrival of Sir William Maxwell as new Governor in 1895. As previously noted, Maxwell, who had served in the Malay States prior to his appointment to the Gold Coast, was a strong advocate of state appropriation of land, both as a means of securing revenue for the government and as a way of attracting British investment (see chapter 2). After an interim announcement in 1895 that no concessions would be valid without the Governor's approval, Maxwell drew up a Public Lands Bill, 1897, in which the question of "Crown Rights" was dropped. However,

as with the abortive legislation of 1894, the basis on which land was declared "public" was extensive. For instance, only land which could be clearly shown to have an individual owner was excluded from the definition.¹⁶ It is therefore not surprising that like the Crown Land Bill, the 1897 legislation was eventually dropped as a consequence of combined opposition from advocates of the status quo - the expatriate concessioners, Chiefs, and African lawyers.

Eventually in 1900, the authorities succeeded in passing a Concessions Ordinance, 1900, which superceded the 1897 Bill. The objective of the 1900 Ordinance was stated as being to enable the government to supervise land alienation in order to prevent fraud and to guard against effects prejudicial to the public interest.¹⁷ It provided for the establishment of a Concessions Court with the duty of validating all registered and undisputed concessions. It also limited mining concessions to 5 square miles each, and those for timber and rubber were not to exceed 20 square miles. A royalty of 5 per cent (later reduced to 2½ per cent) was imposed on all profits made by concession holders.

Clearly, the 1900 Concessions Ordinance marked an abandonment of the radical policy of Crown/Government ownership of land advocated by Griffith and Maxwell in that it confirmed African ownership of land. There appears to be several reasons for this capitulation not least because of the security dangers of the policy. The late 1890's was a turbulent time for British imperialism in Africa: a war was brewing in South Africa and Sierra Leone had just experienced a hut tax revolt. In the Gold Coast Colony itself, not only was opposition to the land

question nearing the point of insurrection and Europeans beginning to consider the area unsafe for investment, but the conquest of Ashanti and the North was also far from complete. Thus, the unstable political situation in Africa at the time gave the Colonial Office the feeling that it was biting more than it could chew. On the other hand, it was also becoming evident at the time that even with a system of African proprietorship, the colony was producing the goods needed for the world market, so that the establishment of plantations was considered unnecessary. Finally, the Colonial Office also feared that the loss of land would affect the powers of the Chiefs which were crucial to the success of the policy of indirect rule.¹⁸ The failure of the Colonial administration to establish government control over any significant portion of land would have far reaching consequences for the acquisition of land for railway and harbour works.

THE GOLD COAST LAND ACT, 1876, AND THE RAILWAYS:

However, some legislative attempt had already been made to deal with the particular conditions relating to public works. One of the first pieces of legislation passed by the British Parliament after the proclamation of Colonial rule over the Gold Coast colony in the 1870's related to the acquisition of land for public work projects. Under this Public Lands Act, 1876, the Colonial Government was empowered, subject to the enactment of appropriate Ordinance, to acquire any land, whether occupied or unoccupied for public use. Article 6 of the Act provided that compensation should be paid only for occupied/developed land, i.e. property holdings, while "waste" or unoccupied land was to be taken free of charge. It also provided that

any land acquired under the Act which remained unutilised for a period of ten years - either because the proposed project for which it was originally acquired had fallen through, or because land became superfluous on the completion of the project - should revert to their original owners subject to the approval of the Governor.¹⁹

In the late 1870's the new administration acquired several plots of land especially in the immediate vicinity of the coastal castles and forts, for the erection of public buildings to cater for its expanding civil and military establishment. When Fitzgerald and Mercer submitted their application for railway concession to the Colonial Office in 1879, in which they requested land grants under the Act, the Colonial Secretary, Sir Michael Hicks turned down the proposal because "the Act referred to Government and not private enterprise."²⁰ These were, of course, the years when officials optimistically expected a major piece of Crown Land legislation which it was hoped would satisfy the demands of the private sector. However, events were to prove them wrong. As we have observed, successive attempts in the 1890's failed to establish government control over unoccupied land. The result was that officials began to perceive the Public Lands Act, 1876 as a means of achieving some of the aims of their abortive land reform proposals by the back door. It might permit the establishment of government control over large tracts of land, some of which would eventually be allocated to private enterprise. The acquisition of land for railway construction from the late 1890's provided the ideal opportunity for such a ploy.

By January 1898, the publication of the Consulting Engineers report had resulted in the Colonial Office's decision to construct

the pioneer line from Sekondi on the coast to Farkwa mining districts. The same month the Gold Coast Legislative Council passed a Railway Ordinance, No. 7 of 1898 which authorised the commencement of the project.²¹ The Ordinance also provided for the acquisition of land for railway construction under the 1876 Land Act. The actual mechanism was straight-forward. The Colonial Government passed an Ordinance authorising railway engineers and surveyors to enter the land to prepare the necessary plans and maps, which were then publicised in the Government Gazettes. Claims for compensation then were to be submitted within 21 days, after which the land automatically became the property of the Government. The implications of this procedure were that land acquisition or the settlement of claims for compensation should be no hinderance to the commencement of proposed railway schemes:

Whether or not any dispute or doubt shall arise as to the ownership of or compensation properly payable for such lands it shall be lawful for the Government through its servants to enter upon such lands 21 days after service of such notice, and pending the decision of the courts, to deal with all such lands in all respects as if they had been conveyed to and became vested in the Colonial Secretary in trust for Her Majesty.²²

The wide powers bestowed on the government by the Railway Land Ordinance were too obvious to be ignored, especially at a time when attempts at land reforms were being frustrated. The Crown Agents were the first to suggest that a half mile strip of land on each side of the proposed track should be acquired by the Government with a view to leasing it subsequently to mining, timber and plantation concessionaires.²³ The Secretary of State for the Colonies, Joseph Chamberlain seized upon this idea and went further to instruct that the width should be increased to one mile on each side of the line. He also stressed that very large

acquisitions should be made in the area of main stations along the route, part of which would be leased to merchants for commercial and residential purposes.²⁴ The aim of the Crown Agents/Chamberlain proposal was that Government would acquire land far in excess of the actual needs of the railways and that much of this would be then leased to private enterprise. Obviously financial objectives rather than government control over land per se lay behind such proposals: at this time it became evident that Chamberlain's efforts to obtain imperial financial assistance for the railways had met with limited success, and the Colonial Office was desperately seeking all sorts of financial aid including assistance from the mining companies. (see Chapter 7 on Finance). Revenue generated by excess railway land allocated to private companies was therefore envisaged as an additional means of making the lines pay for themselves.

However, officials on the spot knew that such ambitions were unrealistic. In January 1899, Acting Governor Hodgson wrote a lengthy despatch to the Colonial Office in which he stated the disadvantages of Chamberlain's ambitious proposal:

1. He anticipated African opposition, especially by the Aborigines Rights Protection Society;
2. The policy would provide added fuel for the Ashanti resistance movement;
3. Most of the territory between Sekondi and Parkwa (the mining districts) had already been placed under notice of concession to expatriate business interests; any large scale acquisition of land would therefore lead to the payment of large sums in compensation to

such companies.²⁵

Consequently a uniform width of 66ft., which was increased to accommodate large cuttings and banks, was eventually acquired for the Sekondi-Tarkwa-Kumasi line (1898-1903).²⁶ Clearly, the limited amount of land acquired - hardly more than the bare minimum needed for the construction of tracks - amounted to a total abandonment of the Chamberlain proposal.

One of the earliest problems to attract the government's attention after the completion of the Sekondi-Kumasi line related to the incidence of falling trees on the railway track and the resultant need to acquire further land in order to cut down all dangerous trees. Ever since the Sekondi-Kumasi line had been opened in 1904, falling trees became a perennial problem for the new Railway Department. Between 1904 and 1907, for instance, no less than 992 trees had to be removed from the tracks. The problem seemed to be a persistent one: in 1907, 273 trees fell, making that year the second worst year. Some of the fallen trees had caused fatal accidents.²⁷ Although part of the problem was due to the fact that trees had not been properly cleared from the track during construction,²⁸ it was equally true that the narrowness of the railway "strip" was also responsible. When, as in the Gold Coast, railways were being constructed through a tropical rain forest consisting of an upper canopy of up to 150 feet above ground level, a 66ft. strip of land was simply too narrow to clear all potentially dangerous trees. Thus in 1906, the Government considered acquiring a further strip of 200 feet on both sides of the track which would then be cleared of trees. However both the Chiefs, and the mining companies whose lands adjoined the Sekondi-Kumasi line,

laid claims to timber and firewood rights. The Railway Department suggested that the Government abandon the decision to acquire the land, and that instead landowners should fell their own trees which would then be transported free of charge on the railways. But the suggestion was never adopted because of the expected costs to the railways. In the end the Department decided to fell the trees itself (although the land itself was never acquired), compensation being paid to the landowners.²⁹ It must be noted however, that these disputes were not centred around outright opposition to land acquisition per se, but rather raised the question as to who should benefit from the increased value of land alongside the railways. The Government, being the owners of the lines, wanted such benefits to accrue directly to the Treasury, whereas the owners of the land (to whom no compensation was paid for the land itself in the first place) disputed the administration's claim. This conflict was to become a recurring one throughout the period under consideration.

As a consequence of its difficulties over trees adjoining the Sekondi-Kumasi Line, the Government began to consider revising its railway land acquisition policy. The Consulting Engineers explained:

In view of the awakened activities of the native lawyer it seemed to us to be desirable that Government should acquire ample land before its value were enhanced by the construction of the line to enable all dangerous trees to be felled within railway land.³⁰

From now onwards, a strip of land of 200 feet on both sides of the track was to be acquired for all future railway projects. Although this decision emerged from the need to secure ample land both for the immediate and the future needs of the railways, the amount of land the Government

actually acquired would seem to suggest a revival of the Chamberlain land-acquisitive programme. For instance, by March 1908 when the acquisition of land for the 40 mile Accra-Dangoase line (1908-1911) was completed, the width of such land varied from 200 feet to as much as 800 feet on either side of the track.³¹ On the 18 mile Tarkwa-Prestea branch line (1908-1911) widths varied from 150 feet to 300 feet on either side of the track.³² All these strips of land were acquired in bits and pieces ranging from just over a few scores of yards to about a mile long, the widths of which were extremely uneven. But the haphazardness of these strips, it must be noted, was not the result of resistance to Government acquisition on the part of landowners, but instead was due to the administration's own policy of by-passing such landed properties as mining concessions, towns and cocoa farms. The aim was to minimise the incidence of claims and counter claims for compensation for property.

Consequently, by the time the nearly 500 mile network had been completed in the 1920's the strips of land acquired for the permanent way had assumed a peculiar shape, to be explained largely by variations in the level of economic activity in different parts of the country. Thus the Sekondi-Kumasi line which passed through the centre of the mining regions had the lowest level of alienation - a uniform of 66 feet, followed by the 18 mile Tarkwa-Prestea branch line, - between 150 and 300 feet on either side of the track. The Accra-Dangoase-Kumasi line had widths varying from 200 feet to 800 feet on both sides of the track, while the Central Province line had an average width of 400 feet on both sides of the track.

Hence, the Government had thus secured land for the permanent way with minimum resistance from landowners. However, in Ashanti a different situation existed: here all government title to land for railway construction was rather ambiguous because of the fact that the 1876 Act under which land was obtained applied to the Colony alone. As a result, in fact, only acquisitions in the Colony appeared in the Government Gazettes. As Ashanti was conquered by force of arms the Colonial Government simply seized the land it needed for railway construction without the formal legislative procedures that had taken place in the Colony. The fact that land was taken without legality was a matter for concern, especially in view of the fact that on the defeat of the Ashanti, the Governor, Sir Mathew Nathan categorically stated that the land holdings and powers of the Chiefs would not be interfered with as long as they remained loyal to the Government. Nathan had instructed:

They should be told that the Kings Order does not interfere with the rights in land nor with any other rights of the Chiefs and people so long as they do not work against the Government.³³

Hence, no sooner had the railways been completed than Ashanti Chiefs began to lay claim to land adjoining the line - land which supposedly belonged to the Government, but for which the Government had no legal proof of ownership. Consequently in 1908, the Chief Commissioner of Ashanti was requested to investigate the Government's position in respect of land ownership in the territory. The results of the enquiries revealed the Government's weak position which led the Commissioner to conclude that: "it would possibly now be inadvisable to reopen the

question of title."³⁴ Accordingly, the issue was shelved.

However, the question of land titles in Ashanti proved a continued recurring sore. For instance, in 1916 the Chief of Bekwai brought action against the Railway Department for digging ballast material from his land adjoining the railway track. On that occasion the Railway Department awarded compensation to the Chief and the case was discontinued. But the issue embarrassed the Government, prompting the Governor, Sir Hugh Clifford to declare in 1918 that: "I also want the position of the Government with regard to land in Ashanti to be defined as clearly as possible."³⁵ Apparently nothing came out of the Governor's instruction. When, in 1924, John Maxwell, the new Commissioner of Ashanti raised the matter again, it was decided to let sleeping dogs lie because of the fear that "any inquiry into these questions may raise further questions."³⁶ As a consequence of this policy of concealment, no information on Government ownership of land in Ashanti is available.

THE 1876 LAND ACT AND COMMERCIAL DEVELOPMENTS:

Although the Colonial administration had generally rejected using the 1876 Act as a means of acquiring large amounts of land alongside the railways, to be used for private purposes, nevertheless when it came to the immediate developmental needs of the railways then officials came to realise that some degree of alienation to private needs was necessary. This was in particular to assist Commercial developments at stations and harbour sites which had become the focal points for urban development (see Chapter 10). Consequently, they were prepared

under the Act to lease land acquired for public works to private interests.

Sekondi, the site for the proposed lighterage port and the railway terminal was the first to be acquired. Since Sekondi was only "a small fishing village consisting of a few mud houses,"³⁷ it might be assumed that acquisition would be easy. Nevertheless, even here there were hidden problems. As soon as the site was selected for the proposed terminal port, European mining and trading firms rushed to acquire plots in the village.³⁸ Thus, instead of Government acquiring the whole area in bulk, it had to be taken over in bits and pieces, so as to avoid such expatriate concessions.³⁹ By August, 1898, 53 plots of varying sizes had been acquired and a 5,000 square yard plan drawn up for the railway station and the lighterage harbour.⁴⁰

At Turkwa an area of half a mile by one quarter of a mile carefully marked out to exclude the properties of the mining companies was acquired in 1899.⁴¹ At Kumasi, the capital of Ashanti where Government land policy operated outwith the formal legal procedure adopted in the Colony, the area of land obtained was even greater. For instance, after the defeat of the Ashanti in 1900, the Governor simply declared that the mile of land surrounding the fort in Kumasi was from then on the property of the Government. Part of this land was allocated to the railways for station facilities.⁴² In other railway stations in Ashanti land acquisition followed the same pattern. Because these acquisitions (in Ashanti) were not backed by any law, no information on them was gathered.

what was the reaction of landowners to Government acquisition of land for these railway stations? There was no evidence of outright opposition although other signs of discontent were discernible. First, the chiefs in the western districts complained that European companies were receiving preferential treatment over compensation for land acquired by the Government. Thus as early as 1899, the Stool of Sekondi petitioned the Government against the denial of compensation on the grounds that its land was not "beneficially occupied" whereas European companies which held land in similar conditions were well compensated. The petition argued that the land could not be regarded as "overgrown" land because it was by the orders of the Government that farms on the land were left unattended.⁴³

Secondly there was disagreement over the disposal of excess railway land. Any land that was not actually needed by the railways was leased to European mining and trading companies. By 1902 50 plots of varying sizes with annual rent ranging from £12 to £24 had been leased at Tarkwa.⁴⁴ At Sekondi, Kumasi and other principal railway stations, similar procedures occurred.⁴⁵ The Aborigines Rights Protection Society expressed concern about the Government disposal of excess railway land at stations. It stated its support for the Government in the laying out of towns and public health schemes, but objected to the fact that the Government, as opposed to the original African landowners, was profiting from the leasing of such lands. They suggested that either such lands should revert to the original owners, and town planning remain under Government control, or that the administration should continue to demarcate and lease the lands but all proceeds should accrue to the

Chiefs.⁴⁶ However, such pressures appeared to have no immediate impact on Government policy and so the public auction of surplus railway land at new railway stations became common during the next two decades.

Meanwhile, policy was becoming more planned and organised. As soon as the construction of the Accra-Dangbese line was authorised in 1907, the Government placed a ban upon new building works at Accra and principal railway stations along the proposed route.⁴⁷ The aim was to secure sufficient land for the railways before its market values increased. At the same time a Railway Station site Board was established under the Chairmanship of the Director of Public Works, to select suitable sites for railway stations. At Accra for instance, it was initially proposed to acquire land around Impomn village at the spur just outside the Accra central market but this was abandoned in favour of a 500 square yard located on the west end of Kyebi Road because the site was immediately below the ridge on which quarters for European railway employees would be built.⁴⁸ In addition to the railway station, the Government had by March 1908 acquired no less than 127 plots of varying sizes in Accra alone. This included Adabraka, which was described at the time as a "Zongo", Korle Gona, where Korle Bus hospital was eventually to be sited; large parts of Christianborg, Osu and James Town as well as the Ridge and Cantonments European Residential Areas.⁴⁹

One common feature of the railway stations was that these were normally located at the outskirts of towns and villages along the routes. This was because the permanent way itself was pushed through the fringes of settlements in order to minimise interference to property.

Thus all along their routes the railway lines spawned new townships such as "Sekondi New Town", "Tarkwa New Town", "Elangoase New Town" and "Tafo New Town." In these New Towns lay the railway stations. Immediately adjoining the station platforms were to be found the "Merchants Plots" i.e. land allocated for commercial and trading purposes. Beyond these were Government buildings and European residences. In all these new railway townships land values rose rapidly. For instance in 1902 the highest ground rent per acre of land in the country was £24 and this was at Tarkwa. By 1921 an acre of land was costing £60 at the new Kumasi railway station,⁵⁰ while at Accra it cost as much as £86 per annum.⁵¹

However, as land values rose in these new townships, so did African landowners' demand for a share in the increased proceeds. Although Government had ignored such demands in the past, the stool of Sekondi was remarkable for its perseverance in pursuit of its claims. Ever since Nketsia II petitioned the Government in 1898 against the denial of compensation for his land acquired at Sekondi, successors to the Stool of Sekondi had raised the issue yearly until court action against the Government was threatened in 1919. The reaction at the Government Secretariat at this time was highly conciliatory, one official suggesting "a payment of a lump sum to silence the Stool."⁵² The administration accordingly awarded a grant of £1,000 to the Stool of Sekondi "as an act of grace made solely in consideration of the past services rendered to the Government by the Stool."⁵³ Clearly this action reveals the weak legal position of the Government in respect of the practice of allocating land acquired ostensibly for railways to

private enterprise. Such conflicts reached a peak during the construction of Takoradi Harbour and new township in the 1920's.

THE PROBLEMS OF LAND ACQUISITION AT TAKORADI:

apart from the obvious economic and technical considerations favouring the location of the Deep Water Harbour at Takoradi, the Consulting Engineers, Stewart and McDonnell also advanced several arguments regarding the suitability of the site for a township:

1. The selection of Takoradi would neither involve the destruction of any existing buildings except the native mud-built villages of Amanful and Takoradi, nor the acquisition of any considerable amount of improved real property at high rates;
2. The site provided a good layout for the European settlement to the west, (the best from a medical point of view);
3. There was plenty of room for the expansion of the business community in close proximity to trackage, warehouses and the harbour reclaimed area;
4. The native town located at the northern and eastern end of the site would form the western extension of the existing native town at Sekondi.⁵⁴

Stewart and McDonnell's report also contained a comprehensive layout plan for the harbour and a new township capable of accommodating 100,000 people. Clearly, the situation at Takoradi, which Guggisberg intended as a "model town" in tropical Africa, was on a very different scale from ordinary railway stations: a much larger amount of land was required.

As soon as the decision had been made to locate the harbour at Takoradi, the Government began to acquire land for the works. Thus in January 1920, Mr Furley, Secretary for Native Affairs, met with the Chiefs of Takoradi, Amanful and Sekondi who owned the land. As a result of the meeting it was agreed that the land required for the harbour and related government services would be provided free of charge; compensation was to be paid for property, mainly buildings at Takoradi and Amanful villages and farms. As regards the proposed township, the Government was to lay out plans, and demarcate plots which were to be leased to the public for commercial and residential purposes. The rents were to accrue directly to the Chiefs. But Government, and not the landowners, would benefit from any land reclaimed from the sea for lease to traders.⁵⁵

Hardly had the deed been drawn up, than European concession mongers began laying claims to the land in question. For instance, a certain Tom Bovey Barrett had already acquired building plots at Takoradi. However, the claim that embarrassed the Government most was that of Mr Fitz-Townsend for 20 square miles, which covered practically the whole of the proposed harbour site, the township and a great deal more. As soon as the Government announced the harbour proposals in 1919, Townsend (who was later described as living a hand to mouth existence at Sekondi) approached the Takoradi Stool for certain concessions. This he later disposed of to a certain Sidney Henderson of the City of London. After passing through a couple of other hands the concession finally ended up with Mr Samuel John Clark, also of the City of London who put in a claim for compensation of £25,000. There

was an immediate official response to the claim. Dr W. K. Colone Rowe, Commissioner of the Western Province was instructed to proceed to Takoradi, to point out to the Chiefs the implications of the Townsend concession and to seek their support in opposing its validity. Not surprisingly, the Chiefs co-operated. The terms of the lease they argued were never explained to them in full: the document they signed was in pencil and therefore could have been altered, and the only land they intended granting Townsend was a plot in the Takoradi village for the construction of a warehouse.⁵⁶ Townsend and the other European concession holders were therefore unable to pursue their cases because the government and chiefs were united against them. Clearly, the Townsend episode was reminiscent of the late 19th century "jungle boom" in the Colony when many fraudulent concessions were sold in the City of London.

However, once the threat from European concession mongers had been overcome African land and property owners began to submit claims for compensation. In 1921 claims from the people of Amanful village for their farms amounted to £500,000. By 1922, total claims had reached £1,300,000 some of which were unspecific.⁵⁷

Even before these claims could be examined, another problem arose. This was the publication of the Takoradi Harbour Committee Report in 1921 which stated that unless the Government reaped the full benefits of revenue from land the Harbour would be running at a deficit.⁵⁸ However, it had already been agreed in 1920 that such revenue would accrue to the Chiefs. The report caused a reversal in Government policy. First, the 1920 agreement with the Chiefs was abrogated. Next Mr John Maxwell, Colonial Secretary was instructed to start fresh negotiations with the Chiefs. The new terms were to be unfavourable

to the Chiefs. For instance, only 10% from ground rents were now to accrue to them. This Provision was embodied in the Takoradi Harbour Lands Ordinance of 1921 which purported to give legal authority for acquiring the land.⁵⁹

Aided by African lawyers, however, the Chiefs rejected the Government offer and instead resorted to the courts. The issue at stake now was that of the legality of Government action. The 1876 Land Act under which the Government passed the Ordinance authorising land acquisition at Takoradi it was argued, applied to land required strictly for public works. A township in which land was to be leased to the public for private use, could not be acquired under the same terms as those of the harbour and railways. The Takoradi Harbour Lands Ordinance, 1921, Counsel submitted was therefore ultra vires.

The case came up for hearing in June 1923 at Sekondi. Even before the evidence for the Government had been completed, the judge, Mr Justice Hall recommended that there should be an "amicable settlement" between Government and African claimants.⁶⁰ Clearly, the legality of the Government's allocation to the members of the public, of land which was supposedly for harbour construction was dubious. In fact, the judge confided to the Crown Counsel, Mr Aitken at the time that he was not favourably impressed with the Government negotiations and that he had some doubts whether the Harbour Lands Ordinance and for that matter previous railway land ordinances were not ultra vires. He therefore suggested the payment of 50% from ground rents to the African Chiefs. In view of this Aitken telegraphed the Governor that: "in the special circumstances of the case and in view of the fact that the other side

are able to prove (their case) this is probably the best I can do for the Government."⁶¹

However, Guggisberg agreed only with reluctance. He insisted that the negotiations had been made in good faith, but conceded that even if the courts ruled in the Government's favour it was likely that the Chiefs would appeal to the Privy Council with some prospect of success. At a special Executive Council meeting on 23 June 1924, therefore it was agreed to accept the judge's recommendations. On 30 June a settlement was reached as follows: a lump sum of £10,000 was to be paid to the Chiefs to meet all claims for compensation for property excluding buildings at Lakoradi and Amanful villages; 50 per cent of all ground rents was to go to the Chiefs; and Government was to lay out and lease plots in the new township for which all expenses were to be derived from the portion of the rents that was due to the Chiefs.⁶²

In addition to these problems there were two other issues that needed resolution. The first related to the rehousing of those people dispossessed by the harbour scheme. It was at first proposed that harbour engineers should construct temporary homes for those whose houses required early demolition. But this policy was eventually abandoned in favour of the permanent resettlement of the people in the proposed township. In addition, 10 per cent of the values of the demolished houses were to be paid to the owners as a disturbance allowance.

However, the plans for two-roomed houses were rejected by the villagers, who insisted upon three rooms and larger compounds. The Government balked at this proposal because it would entail a further

£47,000 on top of the £53,000 allowed for in their plan. The eventual outcome of this conflict was an agreement that full compensation should be paid and the people would build their own houses. This outcome was particularly welcomed by the Government as it involved expenditure of only £17,000, a saving of as much as £36,000 on their original two bedroom scheme.⁶³

The second issue centred around the question of racial segregation in Government town planning schemes. As we have noted elsewhere, the railways were normally pushed through the outskirts rather than through the towns and villages themselves with the result that entirely new settlements emerged alongside the older ones. Although the original aim of Government appeared to be the establishment of state control over such lands which by lease to European traders would generate revenue for the Treasury, the system soon degenerated into the institutionalisation of racial segregation in Government town planning. The first official move had already occurred in 1919 when the Government published a guideline entitled "Residence in the Segregation Areas of the Gold Coast." This forbade the transfer of plots in European segregated areas to Africans. It also made the presence of native children in these areas an offence, whilst servants and their wives were allowed in such areas only within the hours of 9.00 am and 6.00 pm.⁶⁴ Nevertheless, it was with the publication of the Fakoradi township plans in 1921 that the issue came into a sharper focus. The plan included an European residential area located at the Western end of the town, then industrial and commercial areas close to the harbour, and Government offices and hospitals, as well as recreational grounds and parks located at the centre of the township. To the extreme east of these, in the

direction of Sekondi, the African township was to be located.

The people of Amanful were the first to raise objections to a scheme which required them to move from their original homes to more swampy areas in order to make room for the European settlement. They demanded an assurance that half of their total land surface should be reserved for them for farming, fishing and dwelling purposes. More organised opposition came from the African educated elite, who once again rallied under the umbrella of the previously moribund Aborigines Rights Protection Society. They argued that segregation was a "selfish precaution" in as far as it purported to protect the health of only one section of the community. In all the principal railway stations and townships the Aborigines argued, Europeans had taken the best sites with the result that there was a "tendency to squeeze the people out of every congested area left to them."⁶⁵ Ironically, the demands of the African elite were that Government should allow them "the educated and better classes of the African community" to settle on the neutral zone adjoining the recreation grounds, adding that such a scheme would not interfere with the health of Europeans.⁶⁶ Clearly the demands of the African elite were limited: they neither opposed the principle of racial segregation nor did they demand the right to live in the European areas. On the contrary, they wanted to be treated differently from the rest of the uneducated African population. Not surprisingly, the Government granted their request by allocating land between the Hospital and recreation grounds, and the African township for an "African Residential Area."

TOTAL LAND SURFACE OWNED BY THE RAILWAY AND HARBOURS:

Did the Gold Coast Railway and Harbours, and for that matter the Government become significant owners of land? In 1931-32, the Government compiled a statement showing the extent of State ownership of land in the country.⁶⁷ The statement was conspicuous for its lack of information about the situation in Ashanti. This was because Government acquisition in that part of the country was not underpinned by any legislative procedures and therefore no such data was gathered. However, the publication showed that in the Colony, i.e. the Southern Territories, state ownership of land amounted to a mere 52.28 square miles or approximately 0.20 per cent of the 23,937 square mile total land surface of the Colony. But while the public domain was thus minimal, it was significantly located at key railway stations and growing urban centres. For instance, Government ownership at Accra and its environs was 12.07 sq miles; Koforidua and New Juabeng District - 4.63 square miles; Oda (terminal of the Central Province railway)- 1.319 square miles; Sekondi-Takoradi - 8.597 square miles and Tarkwa - 5.29 square miles.

Did the Colonial Government have to pay substantially for these lands? This question can only be tackled with a limited degree of accuracy because the available data largely represents estimates rather than actual expenditures. This is because most claims for compensation were never really settled for a long time after the projects had been completed. A case in point was the claim for compensation at Sekondi by the Stool of that town which dragged on for two decades (1899-1919). The estimate

for the 168 mile western line was £3,410 including stations (or £20 per mile)⁶⁸ while that of the Prestea branch line was £180 (or £10 per mile).⁶⁹ Estimates for the 40 mile Accra-Manguase line was £4,782 or £119 per mile.⁷⁰ More comprehensive data however emerged during the 1920's. For the 82 mile Tafo-Kumasi extension (1920-23), actual expenditure on completion amounted to £25,000, including a sum of £11,000 paid in compensation for property acquired at the new railway station at Kumasi.⁷¹ At Takoradi, total expenditure for the acquisition of land both for the harbour and the township was £28,500.⁷² There is however, no information regarding the 100 mile Central Province Railway. The grand total of these figures, both estimates and actual expenditure for the various projects, amounted to £62,000. Even allowing for underestimation and the lack of data on the Central Province line, it remains evident that expenditure on land did not constitute any significant portion of railway and harbour capital costs. If this figure (£62,000), is set against the £13 million invested in railway and harbour works, expenditure on land represents a mere 0.47 per cent of total expenditure. But while expenditure on land was thus negligible, nevertheless it accrued principally to a tiny elite of the African population - Chiefs and lawyers.

CONCLUSION

Land allocation in the Gold Coast was constrained by the ambiguities of land ownership; land titles were never properly clarified and this affected the railways as well as all other forms of investment. In the formative years of Colonial rule, the authorities envisaged state appropriation of land, through which British capital would

operate, but there was such an agitation from 1894 over proposed land laws that the Government was forced to retreat to becoming an adjudicator in land transactions rather than an outright owner of land. Consequently, the administration was obliged to rely on the 1876 Land Act to acquire land for railway development.

Not surprisingly, railway development acted as a focal point for broader debates, not only over Crown Land but also about urban land use and/or ownership. The 1876 Land Act gave enough power to the Government to acquire land for public work projects and therefore these debates or political problems did not seriously constrain the construction of railways and harbours. In certain districts, such as the Eastern Province, the Government took more land than in other districts, while in certain places, particularly at railway stations and townships, it actually took more land than was needed. What the 1876 Act did not allow was the allocation of land acquired under the Act for private enterprise. Thus, to the extent that Government wanted to use the Land Act to assist the natural urban developments following from railway construction, its ability to do so was uncertain. The ill-defined legal situation rather tied the Government's hands in stimulating or planning urban development. But because of the politically sensitive nature of land issues in the Gold Coast, the administration was unwilling to introduce new legislation to give itself the necessary powers to allocate public land to private use. Consequently, policy had to operate surreptitiously: to advance Government claims and hope that nobody would object. When they did as was the case at Takoradi, the Government had to compromise.

The 1876 Land Act did not apply outside the Colony. In Ashanti land for railway and urban development was acquired simply through force, without legislative power. Consequently, in Ashanti there was no legal backing for Government ownership of railway land - a situation which could conceivably create future troubles for the Railway Department.

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CHAPTER 7

RAILWAY INVESTMENT AND COLONIAL FINANCIAL POLICY

An English Ruler, who looks upon himself as the minister of the race he rules, is bound to take care that ... he engages in nothing that will not produce an income sufficient to defray the interest on its cost.

'The Times', July 30, 1874.¹

The fact that railway projects are highly capital intensive cannot be over stressed. Until the advent of electric power, no other industry required such a large quantity of fixed capital per unit of output.² In addition, railways make their most useful contribution when hauling over long distances, which in turn means that lines need to be built and operated in large segments, which inevitably increases the initial capital outlay. Thus in the U.S.A., for instance, it is suggested that by 1880 the accumulated volume of capital funds invested in railways alone was of the same order of magnitude as that invested in all manufacturing industry.³ Even in the Gold Coast, the railway system was the most highly capitalised individual enterprise to be undertaken throughout the Colonial era. Thus, of the £35.3 million total foreign capital (both public and private) invested in the Colony as a whole by 1936, £13.4 million or 38 per cent was invested in railway and harbour projects.⁴ Such a massive requirement for capital poses a problem in the mobilisation of finance. This is especially so because a country's first railways are likely to be built when its capital markets are still poorly developed. For these reasons, it is

assumed, that the problem of railway finance has three distinct strands:

1. It can stimulate the development of local capital markets; or
2. It can require the sale of railway securities abroad; or
3. It can involve governments as sources of loans or guarantors of a rate of return on capital outlay.⁵

The purpose of this chapter is to examine the funding of the Gold Coast railways and associated ports and harbours, and the implications for the overall financial administration of the Colony.

In order to understand the pattern of the Gold Coast railway finance, it is important to appreciate the Gold Coast's Colonial dependence upon Britain. In other words, there is a need to locate the issue of railway finance within the general context of the British Government's attitude towards public finance in the Crown Colonies. Earl Gray's dictum of 1853 that, "the surest test of the soundness of measures for the improvement of an uncivilised people is that they should be self-sufficing,"⁶ succinctly illustrates the crux of imperial financial policy towards Colonial dependencies. This was that money should never flow from the British Treasury into the Crown Colonies. This policy constituted one of the greatest contradictions of late nineteenth century British Imperialism. On the one hand, the Crown Colonies were supposed to play a dual role as both sources of raw materials, and markets for metropolitan manufactured goods. On the other hand, if they were to undertake public work projects, such as railways and roads, which were crucial for the fulfilment of these tasks, the funds were not to come from the British Government, but were to be raised in the market place. It is true that a Colonial

Loans and Stock Act, 1877 permitted Crown Colonies to issue stocks on the open market. Nevertheless, unlike the White Settler Dominions, whose stocks were admitted as Trustee Securities of the British Parliament, the Crown Colonies were unable to compete with sovereign countries unless they issued their stock at a higher rate of interest.⁷ Such a situation spelt an inescapable debt trap. As Kesner points out, the Crown Colonies were "caught between high interest rates and stagnant growth and their only rational choice was to abstain from development programmes."⁸

It was this dilemma that faced Joseph Chamberlain when he became Colonial Secretary in 1895, especially in respect of the finances of the West African railway proposals. One of his immediate actions was to attempt to divert dividends from the Suez Canal shares towards the establishment of a central pool from which Crown Colonies could borrow money for public work projects. However, the British Treasury was opposed to any such direct imperial assistance, because "any new departures in financial arrangements inevitably lead to complications and upset comparisons."⁹

But while the Treasury was unwilling to depart from its financial orthodoxy, broader opinion was changing. The view was now developing in official circles that, given the substantial capital costs involved in railway building, funding of the West African railway scheme, should be seen as activities as much for the Imperial Government as for the individual Colonies.¹⁰ It is however, interesting to note that this particular development was partly due to the special circumstances of surplus capital in the mid 1890's: economic recovery after the so-called Great Depression (1873-1895) led to surplus capital

not only in the market place, but also in the Post Office Savings Bank and the Local Loans Funds (- Both of which were administered by the Treasury). As Hicks Beach put it:

... would it not be possible to direct existing local loans stock to loans for Crown Colony projects and raise fresh stock for home loans at a lower rate of interest ... Chamberlain is certain to want accommodation of this kind and they (Colonies) could pay good interest as compared to what we get here.¹¹

Clearly, the Treasury wanted to kill two birds with one stone: to ensure the success of the proposed railway schemes, and at the same time resolve its domestic financial difficulties.

It was not until 1899 that negotiations between the Treasury and the Colonial Office resulted in a Colonial Loans Act (1899), authorising the Treasury to lend money to Crown Colonies from the Local Loans Fund for specified public works. The Act, which was based on the Local Public Works Loans Law of the United Kingdom, provided for a lump sum of £3.3 million. That the Gold Coast was to be an important beneficiary from the start is demonstrated by the fact that £676,000 or 20 per cent of the authorised loan capital was earmarked for the Sekondi-Tarkwa railway line.¹²

Hardly had the Act been passed however, than the outbreak of the Anglo-Boer War began to hit Britain hard. Capital became much more difficult to obtain. The British Government now found itself issuing large stocks towards the war effort, and the entire capital market was thrown into disarray. Not surprisingly, the Treasury announced that it was raising the interest rate on money borrowed under the 1899 Act by 1 per cent, to reflect the current market rates. In addition,

it also stated that debt charges would constitute "first charge liability" on the general revenue of the Colonies.¹³ In other words, capital charges under the 1899 Act were to be met directly out of Colonial revenues, rather than being met from revenue generated from the specific project on which the money was spent.

Consequently, the Gold Coast administration decided not to borrow under the 1899 Act. One reason was that the decision to extend the Tarkwa railway by an additional 124 miles to Kumasi meant that the Colony would require funds far in excess of the £0.6 million provided for under the Loans Act. The only realistic possibility of raising the extra money that was needed was to go to the open market. But since money borrowed from the Treasury would constitute a first charge liability on Colonial revenues, it follows that the overall picture of the Colony's financial position would not be attractive to stockholders at the market place. For these reasons the Crown Agents' advice prevailed and the Gold Coast abstained from borrowing from the Treasury.¹⁴

In the meantime, the Senior Crown Agent, Montague Ommaney had transferred to the Colonial Office early in 1900, to become the head of the West African Section. He immediately re-opened negotiations with the Treasury over the issue of Crown Colony finance, especially the finance of the West African railway projects. He now insisted upon obtaining some sort of British Parliamentary Guarantee for Crown Colony stocks, as was the case with the White Settler Dominions. Eventually in July 1900, this demand resulted in new legislation, the Colonial Stock Act (1900) (which superseded the Colonial Loans and Stock Act, 1877), under which Crown Colony stocks would now be admitted as Trustee Securities of the British Parliament.¹⁵ Clearly, the 1900

legislation marked a turning point in the history of West African railway projects, in that the Colonies could now issue stock on the open market under Imperial Guarantee at the normal rate of interest, and still attract investors.

How then did the Gold Coast make use of the 1900 Act to finance its railway and harbour works? Kay's meticulous collection of documents and statistics on Colonial Ghana¹⁶ must provide a convenient starting point for answering this question. Tables 7.1. and 7.2. give summaries of the trade and financial returns of the Gold Coast between 1900 and 1930. From these statistics, Kay argued that total expenditure during the period under consideration amounted to over £60 million, of which nearly £33 million, or about 55 per cent was allocated to non-recurrent items, including the administrative, social and economic infrastructure of the Colony. The last, which affected the development of the economy most directly consisted mainly of expenditure on railways and harbours and accounted for just over £13 million, or about 20 per cent of total expenditure during the three decades of 1899-1929. During the same 30 years, Kay further argued, the Colonial government borrowed almost the same amount in London which was largely spent on the railway and harbour projects.

Kay's observation that the Colonial government financed its railway and harbour projects differently from other items (i.e. by borrowing rather than out of general revenue), and his explanation that the policy ensured the safety of British financial interests is apt, but as Table 3 below suggests, the methods of financing the Gold Coast railway projects were much more complex than he had observed.

Table 7.1

External Trade and Colonial Government Revenue and Expenditure 1900-29 (5 year averages) (£000)

Year	Value of Trade	Colonial Revenue	% of Revenue from indirect taxes on trade	Colonial Government Expenditure	Recurrent Expenditure as % of total Expenditure	Development Expenditure as a % of total Expenditure
1900-04	3,202	530	67	878	46	41
1905-09	4,289	702	59	629	78	14
1910-14	8,382	1,197	60	1,093	65	18
1915-19	11,702	1,173	59	1,262	78	8
1920-25	18,796	3,392	59	3,986	56	32
1925-29	23,993	3,983	66	4,331	58	28

Source: Kay, Political Economy of Colonialism, 27

Table 7.2

Loan Works Expenditure, 1900-30 (£000s) (5 year averages).

	Railways	Harbours	Water Works
1900-04	362	-	-
1905-09	60	30	-
1910-14	74	51	77
1915-19	56	24	17
1920-24	835	249	-
1925-29	264	413	-

Source: Kay, Political Economy of Colonialism, 375.

Table 7.3., which shows the statement of the Gold Coast Public Debt between 1900 and 1930, conspicuously indicates that although the administration financed its railway and harbour works through loans raised on the London market, in practice, such loans were never raised until the project for which they were originally authorised was either completed or nearing completion. For instance, the construction of the Sekondi-Tarkwa-Kumasi railway which started in 1898. was completed by 1903, but it was not until 1902-3 that loans were raised to pay for their cost. Similarly, the Accra-Mangoase railway project and the lighterage harbour schemes were authorised as early as 1905, and work started on them in 1906: yet it was not until 1909, that stocks were issued to cover their costs, (i.e. only a year prior to the completion of the line to Mangoase). Furthermore, between 1910 and 1915, the Accra Railway was extended from Mangoase for an additional 30 miles to Tafo, and large scale harbour improvements carried out at Accra and Sekondi. However, loans to cover these works which were authorised as early as 1910 were never raised until 1914, at a time when the projects had been completed. Finally, in 1919, a loan of £6 million was approved as part of the Guggisberg Ten Year Development Programme, £4 million of which was raised in 1920. The 1919 Ordinance was superceded by another one in 1922, which also provided for raising a further loan of £4.5 million to be expended on the on-going projects. However, it was not until 1925, (i.e. two years prior to the completion of the works) that the loan was actually raised. The question therefore re-emerges as to how exactly the Gold Coast administration paid for its railway and harbour projects, at least during the gestation periods of such works?

Table 7.3

Statement of Public Debts, 1900-1930

Public Debt	To whom Due	Rate of Interest	Ordinance under which and Project for which expenditure originally authorised	Date of Commencement of Project	Date of Completion of Project	Date Loan Actually Raised
£ 607,716	Imperial Government	Nil	1896-1900 on account of Ashanti Wars.	1896	1900	1896-1900
£1,035,000	Stockholders ✓	3%	Ordinance No 6 of 1898 and No 10 of 1900 for Sekondi-Tarkwa-Kumasi line.	1898	1903	1902
£ 63,000	✓	3%	Ordinance No 14 of 1902 for Kumasi extension.	1900	✓	1903
£1,030,000	✓	3½%	Ordinance No 4 of 1905 for Accra Railway.	1906	1911	1909
£1,035,000	✓	4%	Ordinance No 6 of 1910 for Tafo Extension and harbour Works.	1910	1914	1914
£4,000,000	✓	6%	Ordinance No 21 of 1919 for Railway and Takoradi Harbour	1919	1927	1920
£4,628,000	✓	4%	Ordinance of 1922 for Railway and Takoradi Harbour	✓	✓	1925

Sources: Government Gazettes and Treasury Reports.

Notes: There were no public debts prior to the commencement of railway construction.

One of the earliest sources of finance for railway projects was short term advances from Lending Banks. This was mainly made possible through the financial expertise of the Crown Agents. As Dumett points out, the Crown Agents functioned as part of the City's system, and besides they maintained large deposit accounts with the major lending banks.¹⁷ Thus, pending the outcome of the Treasury-Colonial Office negotiations (1895-1900) the Agents approached two of their financiers, the Bank of England and the London and Westminster Bank, for short term advances, so as to ensure the continuity of the railway projects. By the time the "pioneer" western line was completed to Kumasi in 1903, such advances had totalled £754,000¹⁸ or 43 per cent of the total cost of construction (- £1.7 million).

Another important source of finance at this time was the Colony's own accumulated surplus funds. The maintenance of accumulated reserve funds by the Colonial dependencies in London had always been a cardinal part of the Colonial Office's fiscal administration of the Colonies. By 1895, the Gold Coast's reserve funds held by the Crown Agents totalled £152,000.¹⁹ Indeed, when Chamberlain first authorised the West African railway projects in 1895, it was from such surplus balances that he asked the Colonial administrations to advance funds towards the preliminary works. By 1903 expenditure from the Colonial surplus fund upon the Sekondi-Kumasi railway had amounted to £702,333²⁰ or 40 per cent of the railway's total capital outlay. Both the surplus fund and the Bank advances were then repaid immediately after the issue of the first Gold Coast stocks in 1902-3.

Despite the essentially ad hoc nature of railway finance during this initial period, the practice of advancing money from surplus Colonial

funds towards railway construction soon became the norm. One reason was that the 1900 Loans Act, like the ill-fated Treasury legislation of 1899, stipulated that capital charges were to constitute first charge liability on general Colonial revenues. The implication was clear: loans would not be raised unless the Colony's financial position was such that it could discharge the debt obligations irrespective of the outcome of the investment. Thus in 1904 when Governor Rodger submitted proposals for further loans for the building of the eastern line, London's reaction was to remind him of his Colony's financial responsibilities.

First, he was reminded that the Colony owed the Imperial Government a sum of £607,716 as a result of the recent Ashanti wars and this was expected to be redeemed in full at the earliest sign of improved revenues. Second, the Colony had for the first time incurred public debts amounting to £1½ million as a result of the Sekondi-Kumasi line, the debt charges of which were to be provided out of annual revenue. Finally, the Governor was reminded that Colonial budgets should consistently show surplus revenue over expenditure in addition to rebuilding accumulated surplus funds.²¹

In response the local administration had to curtail expenditure on other sectors of the economy. For instance, it relinquished responsibility for the experimental cotton farms at Labolabo and Tamale - despite protests from the Empire Cotton Growing Association.²² In addition, it raised customs duties on consumer items such as kerosene, cotton goods, spirits, tobacco, etc. Thus

Africans, who were the principal consumers of such imported goods, were the first to feel the pinch caused by the pressures of railway finance.

Consequently, the Gold Coast was able to maintain a "balanced budget" between 1906 through to the 1920's, and thereby contributed substantially towards the costs of its railway and harbour works.

(Table 7.4 provides data on the Colonial Government's annual revenue and expenditure accounts as well as contributions from surplus funds towards railway and harbour works, while Table 7.5 indicates Government expenditure on such projects). Out of the total of £13.7 million invested in the Gold Coast railways and associated ports and harbours, (including Water works, which formed an integral part of the railway system), by 1927, no less than £5.8 million or 49.8 per cent had been advanced out of accumulated surplus balance - (though these were repaid once loans were raised on the capital market). (Table 7.4 Col.D).

In addition to the advances from surplus funds the Gold Coast Treasury also made annual expenditures from current revenue towards the capital improvement of the railways and harbours. These were not repaid from capital market loans but were consolidated into "Government Loans", as distinct from "Foreign Loans". (Table 7.5.). As noted in Part I of the thesis, shoddy construction and defective works were commonplace. The railways and ports were constructed by British Engineers who were more interested in making handsome fortunes than in good workmanship. Moreover, under the departmental system of construction and indeed, the Murphy and McAlpine contracts, the engineers had no

Table 7.4

ADVANCES MADE FROM ACCUMULATED SURPLUS
BALANCE TOWARDS LOAN WORK.

Year	A £	B £	C £	D £
	Annual Revenue	Annual Expenditure	Accumulated Surplus Balance	Advances Made from surplus balance for Loan Work (Repaid on raising of loans)
1901	693,893	469,459	307,265	142,001
1902	511,502	547,607	328,314	292,149
1903	577,552	593,956	302,162	-
1904	682,193	622,376	355,380	268,183
1905	586,221	616,118	na	na
1906	683,101	628,906	386,277	-
1907	708,718	617,124	477,871	382,248
1908	752,141	687,292	542,721	442,875
1909	778,552	734,637	586,906	318,117
1910	1,006,633	924,862	668,677	590,117
1911	1,111,632	914,500	865,809	734,440
1912	1,230,850	1,157,091	939,568	-
1913	1,301,566	1,353,291	887,843	-
1914	1,331,713	1,755,830	463,707	-
1915	1,456,130	1,627,015	292,822	-
1916	1,835,989	1,465,946	662,865	-
1917	1,624,124	1,424,297	na	na
1918	1,298,674	1,369,486	na	na
1919	2,601,360	1,781,170	1,612,087	-
1920	3,721,772	2,856,347	2,477,512	471,692
1921-22	3,016,520	3,285,290	1,901,786	473,232
1922-23	3,357,196	2,934,994	na	na
1923-24	3,472,834	4,105,938	1,877,237	950,814
1924-25	3,971,187	4,632,633	2,493,668	804,300
1925-26	5,871,556	5,871,556	2,026,634	-
1926-27	4,365,321	4,365,321	2,287,869	-
Total				<u>£5,872,046</u>

Sources: Gold Coast, Treasury Reports, 1901-1926-27.

Table 7.5

Government Expenditure on Loan Works

Project	£ "Foreign Loan"	£ "Government Loan"	£ Total
Railways	8,349,321	1,201,327	9,550,559
Takoradi Harbour	3,090,399	588	3,090,987
Others (Water works)	351,280	776,185	1,127,465
TOTAL	11,791,000	1,978,100	13,769,011

Source: Gold Coast, Treasury Reports, 1901-1929

responsibility for costs, particularly materials. Consequently, they had little incentive to economise. Thus, building proceeded carelessly, and where works were defective they were merely repaired and nobody was made accountable. It is therefore not surprising that the Railways Department made endless demands on the local Treasury for capital improvements as distinct from maintenance. Indeed, "capital improvements" were still being carried out on the "pioneer" western line during the First World War²³ - that is, more than a decade after it had been opened to the public. By 1929, this "extra-ordinary capital expenditure" on railways and harbours had totalled £1.9 million or 14.3 per cent of the gross capital outlay. (table 7.5)

If the 49 per cent advanced from surplus funds is added to the 14 per cent capital improvements, then it becomes clear that up to 65 per cent of the capital cost of the Gold Coast railways and harbours was provided from the Colony's own resources - (though the former was repaid).

One significant result of funding a substantial portion of

the transportation system, (especially during their gestation periods), from the Colony's own resources was to mitigate against the possibility of heavy external debt charges. As noted, the Colonial Stock Act (1900) obliged the Colonial Administration to make capital charge payments - interest and sinking fund (the latter for the amortization of the loan) - directly out of general revenue. In fact, it was to be a first charge liability. In an economy like that of the Gold Coast whose backbone - raw material exports - was subject to considerable fluctuations in world markets, heavy external debt burdens can exert strains, especially during periods of recession. In the Gold Coast this was not the case - at least not before 1929. Railway and harbour investment did create acute balance of payments problems during periods of relatively intensive construction (Table 7.6. Column C). Nevertheless, external debt charges remained relatively low. By 1929, The Gold Coast's total annual external debt payments (both interest and sinking fund) had amounted to nearly £0.7 million. When this figure is set against the £13.8 million which was the value of the Gold Coast's gross domestic exports for that year, it becomes clear that external debt charges amounted to less than 6 per cent of domestic exports in 1929. Indeed, other than the year 1925-6 when the proportion was 6.37 per cent, they had always been below or around 5 per cent. (Table 7.6. Column E). Furthermore, only one of the railway lines - (the Central Province line) - failed to pay its way from the beginning. All the others yielded handsome profits (See Chapter 9). In short, the technique of advancing money from surplus funds towards railway and harbour projects during their gestation periods, together with the general profitability of the railways themselves, meant that British capital investment in the Gold

Table 7.6

Imports, Exports and the Balance of Visible Trade, 1892-1929 (£000s)

Year	A Imports	B Exports	C Balance of visible trade	D External Debt Charges	E D as % of B
1892	597	665	-68	nil	nil
1894	812	850	38	nil	nil
1896	910	792	-118	nil	nil
1898	1,101	992	-109	nil	nil
1900	1,283	885	-398	nil	nil
1901	1,795	560	-1,235	nil	nil
1902	2,120	774	-1,346	nil	nil
1903	2,082	980	-1,102	43	4.48
1904	2,001	1,340	-661	43	3.21
1905	1,486	1,646	160	43	2.61
1906	2,058	1,996	-62	43	2.15
1907	2,366	2,641	275	43	1.63
1908	2,029	2,525	496	43	1.71
1909	2,394	2,655	261	90	3.38
1910	3,439	2,697	-742	90	3.34
1911	3,874	3,792	-82	90	2.37
1912	4,023	4,307	284	90	2.08
1913	4,952	5,427	475	90	1.66
1914	4,456	4,942	486	142	2.87
1915	4,509	5,943	1434	142	2.39
1916	5,999	5,816	-183	142	2.44
1917	3,386	6,364	2,978	142	2.23
1918	3,256	4,472	1,216	142	3.17
1919	7,946	10,814	2,868	142	1.31
1920	15,152	12,352	-2,800	407	3.29
1921-22	7,661	6,942	-719	407	5.86
1922-23	7,900	8,335	435	407	4.88
1923-24	8,448	8,959	511	407	4.54
1924-25	8,315	9,914	1,599	407	4.11
1925-26	9,782	10,890	1,108	694	6.37
1926-27	10,285	12,104	1,819	694	5.73
1927-28	13,770	14,350	580	694	4.87
1928-29	12,200	13,824	1,624	694	5.02

Sources: 1892-1900: Gold Coast, Blue Books for relevant years; 1901-1928-29: Gold Coast Treasury Reports for the for the various years.

Coast railways and harbours did not place heavy external burdens upon the financial resources of the Colony.

However, dependence on surplus revenue for railway finance was not without its negative impact on general public finance. In the first place it could be argued that the stringent financial caution may have deprived the Colony of additional railway investment in areas still deficient in modern forms of transport - (though general labour shortages were also to blame for this). (See Chapter 4). Much more important however, is the Colonial administration's low levels of expenditure on other sectors of the economy. Table 7.7 shows that apart from the relatively high level of expenditure on "Law and Order" (which was crucial to the survival of the Colonial State itself) "social" or "welfare" spending for example, was very low. Thus in 1920, it was estimated that about 28,000 pupils or 1.1 per cent of the Gold Coast's population were in primary schools, while 58,000 patients or 1 per cent of the total population were being treated in hospitals.²⁴ The low priority accorded to education and public health at this time was probably unavoidable given that in developing an economy, expenditure on economic sectors should take first priority - to create the income and wealth which can then be used for welfare purposes. Nevertheless, the priority given to railway and harbour investment failed to be accompanied by a corresponding promotion of other economic sectors, more especially agriculture. In an essentially agrarian economy, one might have expected considerable official attention to "rural development" - but the Gold Coast administration spent relatively little on this. Expenditure on agriculture and forestry protection for instance, amounted to a mere 1.5 per cent of the total annual government spending on the average, during the three decades

Table 7.7.

Government Expenditure on "Law and Order", "Welfare" and Agriculture and Forestry Protection (5 year averages) (£000s)

Year	A Total Expenditure	B Exp. on Defence Police & Law	B as % of A	C Exp. on Social Services (Health & Education)	C as % of A	D Exp. on Agric. & Forestry	D as % of A
1900-04	874	291	33	35	4	3	1
1905-09	629	268	43	49	8	7	1
1910-14	1094	369	34	103	9	17	2
1915-19	1263	456	36	142	11	33	3
1920-24	3985	463	12	138	3	58	1
1925-29	4331	626	14	279	6	40	1

Source: Gold Coast, Treasury Reports, 1900-1929.

before 1929. Indeed, as previously noted, the authorities had to abandon their cotton experimental farms in 1905 in order to maintain an excess of revenue over expenditure. As Green and Hymer point out, the administration's efforts to promote technical progress and increased productivity in agriculture were few, hesitant and mainly misdirected.²⁵ Not surprisingly, when cocoa farms in the eastern districts for instance were severely struck by swollen-shoot disease in the late 1930's the authorities had nothing to suggest but cutting out infected trees.²⁶

But if railway investment acted as a constraint on overall public finance, could the Colony have raised alternative resources to provide these facilities? This then brings us to the question of taxation. Ever since Governor Hill's abortive Poll Tax of 1852, Gold Coast administrators had always considered direct taxation as a politically sensitive issue.²⁷ This was more so because Colonial rule, by its very nature lacked "legitimacy" in the eyes of the colonised. In the

Gold Coast, spokesmen for the African communities (chiefs and lawyers) upon whom the Colonial authorities relied for the implementation of policy, were always quick to point out the contradiction of "taxation without representation."²⁸ Thus in 1896 when the new Governor, Sir William Maxwell drafted a Hut Tax Bill which purported to impose a tax of 10 shillings per hut or household, his deputy, Hodgson was quick to point out the security dangers inherent in such a course. Hodgson wrote:

Even with the employment of force the full collection of the tax will remain doubtful, and the question arises therefore whether in order to collect say £70,000 it is worth while to stir up the country and create an interference with trade.²⁹

Consequently, the authorities retreated to the less radical position of the indirect taxation of exports and imports trades. (see table 7.8).

While the Colonial Administration was willing to impose indirect taxes on Africans, who were the principal consumers of imported goods and producers of cocoa exports, the expatriate mining and trading firms were by contrast, to a large extent, exempted from taxation. The mining companies did pay royalties, but by 1929, such payments amounted to £38,000 or about 1 per cent of total government revenue. The Merchant Houses did not pay any income tax or profit tax at all. Such taxes were paid in the U.K.. The White Settler Dominions, unlike the Crown Colonies, received one-half of the income tax derived from British firms operating in their territories. In 1921, Governor Guggisberg wanted such a concession granted to the Gold Coast in order to "open a new lucrative source of revenue for public works."³⁰ He argued that not only did the Colony derive no revenue from the operations

Table 7.8

Indirect Taxes/Direct Taxes (£000s)

Date	Total Revenue	Import Duties	Export Duties	Other Items	Royalties	Profit Tax	Mineral Duty
1900	385	281	-	-	1	-	-
1901	496	351	-	-	7	-	-
1902	512	382	-	-	3	-	-
1903	578	370	-	-	2	-	-
1904	682	384	-	-	5	-	-
1905	586	334	-	-	-	-	-
1906	683	386	-	-	9	-	-
1907	709	414	-	-	18	-	-
1908	752	490	-	-	15	-	-
1909	779	459	-	-	22	-	-
1910	1,007	611	-	-	18	-	-
1911	1,112	663	-	-	25	-	-
1912	1,231	736	-	-	28	-	-
1913	1,302	780	-	-	25	-	-
1914	1,332	769	-	-	24	-	-
1915	1,456	828	-	-	26	-	-
1916	1,886	1,150	32	-	17	-	-
1917	1,624	683	211	-	24	-	-
1918	1,299	489	131	-	28	-	-
1919	2,601	1,253	419	-	21	-	-
1920	3,722	1,711	571	-	23	-	-
1921-22	3,016	979	798	-	24	-	-
1922-23	3,357	1,494	541	-	20	-	-
1923-24	3,743	1,682	473	-	18	-	-
1924-25	3,971	2,000	283	-	23	-	-
1925-26	4,116	2,165	274	-	41	-	-
1926-27	4,365	2,075	318	16	31	-	-
1927-28	4,112	2,890	272	19	41	-	-
1928-29	3,914	2,264	321	18	38	-	-

Source: Gold Coast, Treasury Reports, 1900-1928-29.

of British firms, but more importantly, non-British expatriate companies were also exempted from taxation. Although the Colonial Office conceded that profits earned in the Colony should be ideally subject to income tax, it turned down Guggisberg's proposal on the grounds that it, "will diminish returns of the United Kingdom Income Tax."³¹ Clearly, one perceives a conflict of interests between the Colony and mother country,

and the Colonial Office decided to subordinate the needs of the local Treasury to that of the metropolitan. In short, given the constraints on its revenues, the government of the Gold Coast could not finance transport infrastructure and other services desirable from both an economic and social standpoint. It elected to give priority to railways and harbours.

CONCLUSION

The fact that the Gold Coast railways were owned by the Colonial Administration meant that issues relating to their finance were inextricably intertwined with the broader issues of Crown Colony financial policy. Constrained by narrow revenue bases and prospects of high interest rates, the Crown Colonies at the end of the nineteenth century were unable to pursue development projects on their own accord. Joseph Chamberlain tried to redress this imbalance by asking for direct imperial financial assistance to Crown Colony public work projects, including the West African railways, though he was only able to obtain Parliamentary Guarantees for Crown Colony Loans which placed them on the same status as the Settler Dominions.

However, the 1900 Colonial Stock Act marked a significant turning point for the West African railway projects because it allowed the Colonies to borrow money from the market place under Imperial Guarantee at the normal rate of interest. But this Act was still very conservative and operated under extreme caution mainly because of the controls exerted by the Colonial Office to ensure that the Government Guarantee would not have to be called upon. So the Colonial Office consistently insisted that Colonial budgets remain in surplus, not only as a means of advancing

money towards the building of the railways, but also as a security for the Colony's financial obligations in general.

Consequently, a large portion of the funds needed for the building of the Gold Coast railway system and associated harbours had to be advanced from the Colony's own resources pending borrowing from the London money market. Although such a policy may have prevented heavy external obligations as a result of open market borrowing, because such loans were never really raised until the projects were about to start yielding revenue, they nevertheless acted as a constraint on the Colonial Administration's activities in other sectors of the economy. Thus, the Colony was only able to build a mere 500 mile railway network, which was confined to a small part of the country. More importantly, although on the whole, the financial situation at the time may have seemed to be very stable and sound, the lack of "rural development", in an essentially agrarian economy, may not have augered well for the future - although this question is beyond the scope of this thesis.

NOTES TO CHAPTER 7

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2. M. Abramovitz, "The Economic Characteristics of Railroads and the Problem of Economic Development", Far Eastern Quarterly, 14 (1954-55), 169-178.
3. Ibid, M.J. Ulmer, "Trends and Cycles in Capital Formation by United States Railroads, 1870-1950", National Bureau of Economic Research, Occasional Paper 43 (1954).
4. S.H. Frankel, Capital Investment in Africa, (London, 1938), 160.
5. Abramovitz, "Economic Characteristics of Railroads."
6. Earl Grey, The Colonial Policy of Lord Russell's Administration, (London, 1853), 281.
7. The first public loan to be raised by Sierra Leone under the 1877 Act was issued at 6 per cent interest but it failed to attract buyers. See Hemming's Minute to Lord Knutsford, 12 October 1889, C.O. Print, Africa No. 464.
8. R.M. Kesner, Economic Control and Colonial Development: Crown Colony Financial Management in the Age of Joseph Chamberlain, (London, 1982), 293.
9. Sir Edward Hamilton to Colonial Office on Suez Canal Shares Scheme, 14 September, 1895, P.R.O: C.O. Print, Africa No. 464.
10. Hamilton to Colonial Office, 10 October, 1895, P.R.O: C.O. Print Africa No. 464.
11. See Hicks Beach's minute to Hamilton, 16 October, 1895, quoted in Kesner, Economic Control and Colonial Development, 76.
12. See Crown Agent's minute, 14 December 1899, on the Colonial Loans Act, 1899, P.R.O: Africa Confidential Print, No 563.
13. Ibid.
14. Ibid.
15. Crown Agents to Colonial Office, 27 March, 1902, P.R.O: C.O. 96/400.
16. G.B. Kay The Political Economy of Colonialism in Ghana, (London, 1972).
17. R.E. Dumett, "Joseph Chamberlain, Imperial Finance, and Railway

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18. Crown Agents to Colonial Office on Statement of Railway Accounts, April 1903, P.R.O: C.O. 96/400.
19. Colonial Office Minute, 25 June 1895, P.R.O: C.O. Print, Africa No 464.
20. Crown Agents, April 1903, P.R.O: C.O. 96/400.
21. Governor's despatch on the Gold Coast's financial position, 10 January 1905, P.R.O: C.O. 96/427.
22. Governor to Secretary of State and copied to British Cotton Growing Association, 29 November 1905, P.R.O: C.O. 96/433.
23. General Manager, Railway Department Report, 1916, 17-18.
24. See Guggisberg's despatch on the state of Public Health and Native Education to the Secretary of State, 16 April 1921, P.R.O: C.O. 96/623.
25. R.H. Green and S.H. Hymer, "Cocoa in the Gold Coast: a study in the relations between African farmers and agricultural experts", Journal of Economic History, XXVI, (1966).
26. Ibid.; see also Kay, Political Economy of Colonialism, 12-13.
27. David Kimble, A Political History of Ghana, 1850-1928, (Oxford 1963), 168-191.
28. Ibid.
29. Governor to Secretary of State, 18 April 1896, P.R.O: 96/314.
30. Governor to Secretary of State, 18 February 1921, P.R.O: C.O. 96/623.
31. See H. Bushe's minute on Guggisberg's proposal, Colonial Office 22 March 1921, P.R.O: C.O. 96/623.

CHAPTER 8

THE MANAGEMENT SYSTEM, PERSONNEL AND LABOUR RELATIONS

The difficulty of organising and administering a new railway system such as that of the Gold Coast cannot be overstated. In both the United States of America and Britain it has been observed that because of the size and complex needs of safety and efficiency, the railway systems completed by the mid nineteenth century were forced to pioneer new techniques of modern corporate management. Consequently, by the turn of the century, the main features of present day railway management had in general been established. This included the separation of the main functional departments of accounting, traffic, locomotive, and maintenance of line one from the other as well as the division of rail networks into a number of sections.¹ The ultimate management of a British railway company for instance, was entrusted to a board of directors elected by the shareholders, with a Chairman whose function was to control the general policy and finance of the company. The day-to-day administration of the railway however, was the prerogative of a General Manager who also co-ordinated the activities of the heads of the various functional departments.²

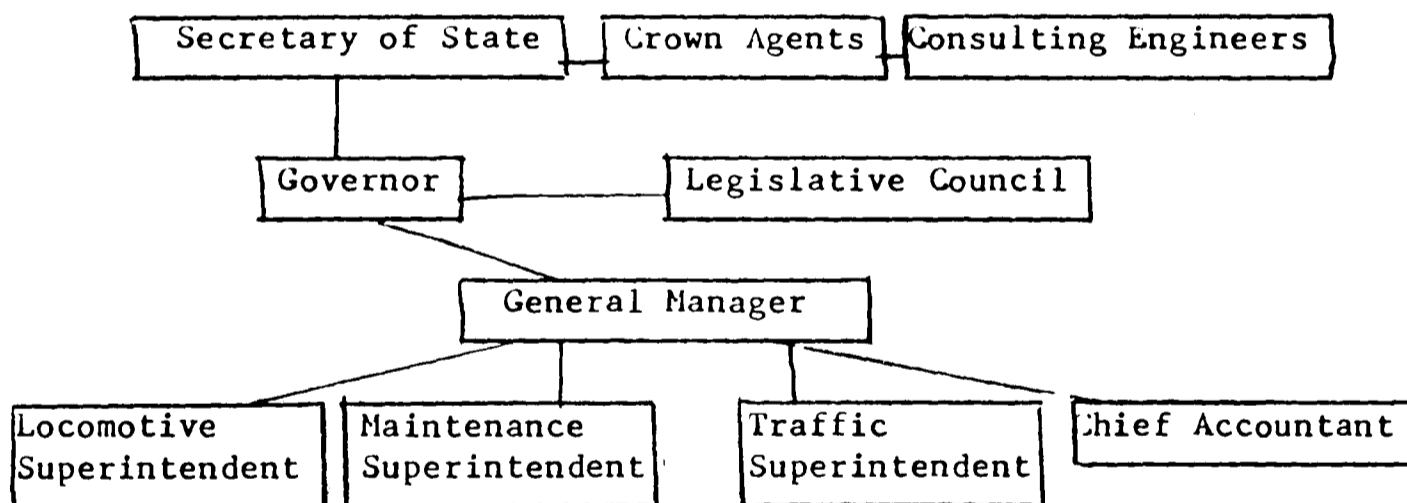
In the Gold Coast where neither large scale commercial or industrial enterprises, nor the skills of managing such enterprises existed around the turn of the century, it proved necessary to import the management structure and the skills to administer it from

Britain. But as Miller has pointed out in respect of Latin American Railways, to introduce modern administrative practices into a less developed country did not inevitably mean that the management itself would be efficient.³ This chapter will examine the management of the railways by focussing on the administrative structure, the recruitment and training of personnel and the conduct of labour relations.

THE ADMINISTRATIVE STRUCTURE OF THE RAILWAYS:

Diagram I shows both the hierarchical administrative arrangements and the functional organisation of the Gold Coast railways.

DIAGRAM I



Following the British model, a centralised and functionally-departmentalised structure was established. However, given that the Gold Coast Railways were publicly owned, the upper tier of decision-taking was not the Chairman and board of directors to be found in a British Joint Stock railway company. Instead, final responsibility lay with the Secretary of State for the Colonies, who was expected to outline broad managerial, technical and financial goals. In practice, much of the general policy making originated from the Governor, as representative of

the Secretary of State. In carrying out this function, both the Governor and the Secretary of State relied on the Crown Agents and the Consulting Engineers for commercial, financial and technical advice. But although the role of the Crown Agents was advisory, in practice because of their wide experience in commercial operations for the Crown Colonies, their opinion was crucial in such important railway matters as rates, and recruitment of skilled labour. In their combined role, the Secretary of State, the Governor, the Crown Agents and the Consulting Engineers performed the functions normally carried out by the board of directors of a British railway company. The day-to-day management of the railways was closer to the British railway company model in that a General Manager co-ordinated the activities of the four main functional departments of Locomotive, Maintenance, Traffic, and Accounts. These had their headquarters at Sekondi. As the Railway Department operated as one of the several branches of the Colonial Civil Service, the entire labour force, including management, were considered to be public servants and therefore directly responsible to the Governor.

There were certain inherent weaknesses in the administrative arrangements. One such weakness concerns the difficulty in the flow of information. In the early days, when communications between Africa and Europe were still poorly developed, the system was not conducive to the smooth running of the railways because the General Manager, Governor, Secretary of State, Crown Agents and Consulting Engineers were not only geographically separated one from the other, but institutionally too they operated as distinct entities. Policy proposals emanating from the General Manager at Sekondi for instance, took weeks to arrive at the seat of the Colonial Government in Accra. Despatches from the Governor

could take months to reach the Secretary of State in London, who as a matter of course, referred such matters to the Crown Agents. They in turn obtained the professional advice of the Consulting Engineers after which recommendations were submitted to the Secretary of State for approval. After approval, the proposal went back to the Governor who then passed a bill through the Legislative Council to give the policy a legal backing. The whole cumbersome system was vulnerable to delays and inefficiency, but as Chandler has aptly pointed out: "the safety and, indeed the lives of passengers depended on continuous effective decision-making."⁴ The fact that the Gold Coast railways possessed no such attribute which was crucial to the successful administration of the system, was clearly demonstrated in 1904. In that year, an inquiry by the General Manager of the Railways as to the suitability of wood fuel for the locomotives took no less than six months to reach the attention of the Crown Agents and the Consulting Engineers. Their advice was that the locomotives should first be provided with spark-boxes and fire-arresters, and that the suitable type of wood, usually mangrove, should be cut and properly dried before being used. In the interim, the Railways had started burning wood, incidentally of the wrong type, and without first adapting the locomotives to its use. Consequently, there were several accidents due to engine failures and a general deterioration in the locomotives.⁵ One solution to the problem was to circumvent the bureaucratic line of communication by allowing the General Manager to deal directly with the Consulting Engineers on purely technical matters.⁶ In addition, with the improvements in the telegraph, steamship and mail services during the first decade of the century, the chronic delays in the flow of information had been largely alleviated.⁷

But a more fundamental problem, which was to remain throughout the period under review, was that of managerial autonomy in railway administration. Because the Railway Department was an integral part of the bureaucracy, its administration was centralised in the hands of the Colonial Government. Thus the 1898 Ordinance which formed the basis for railway administration clearly stated that by-laws and railway regulations were the prerogative of the Governor with the consent of the Legislative Council. Such regulations were to be subject to the approval of the Secretary of State for the Colonies.⁸ Hence, there was little scope for decentralisation. But as we have already argued, railway operation demanded prompt and efficient decision-making which in its turn required a fairly high degree of managerial autonomy. Not surprisingly, a report on the railways in 1906 attributed some of the operational problems to "the inexperience of Government in railway matters and a tendency to keep a somewhat tight hand on the General Managers."⁹ The Governor accepted the report's recommendation that the 1898 Ordinance be amended so as to give the General Manager powers to make certain by-laws which were to be subject to the approval of the Government. But he rejected any predisposition towards autonomy in such matters as railway rates and financial administration because:

The Legislative Council is clearly the proper authority for dealing with the financial policy of a railway the interest on the loan for the construction of which is provided out of general revenues of the Colony.¹⁰

There were thus two main areas of disagreement between Railway Management at Sekondi on the one hand, and Colonial Officials in Accra and/or London on the other hand. The first, (the detailed discussion of which is deferred to the next Chapter) concerned railway rates. Because the

General Manager lacked control over tariff policy, and because such issues were effectively decided either in Accra and/or London, the expatriate mining lobby, it will be shown, were able, through the Colonial Office, to influence rates in their own interest. The result was that "uneconomic rates" were imposed on the Department. Second, because the Colonial Loans Act 1900, under which the Colony borrowed money to build the lines made interest and sinking funds chargeable directly on Colonial revenues, the railways did not keep a separate account from that of the central government. Thus the Colonial Treasury both provided funds for railway maintenance, capital developments as well as debt charges and also reaped any profits. As noted (see Chap. 9), the railways produced excess revenue over expenditure throughout the period under review. Consequently, the question as to who controls railway surplus revenue became a major bone of contention. Naturally, management demanded a greater say in the allocation of such profits.

As early as 1905, the General Manager called for the creation of a Railway Renewals Fund into which any surplus revenue was to be credited but the Governor rejected the proposal because: "so long as anything stands to its credit, it will be a strong temptation to the Railway Authorities to carry out unnecessary and extravagant expenditure."¹¹ Instead, the Department was asked to submit ad hoc estimates for capital improvement. However, the ability of the Colonial Treasury to meet any such demands was dependent on both the financial position of the Colony as well as the priorities of the Government. Consequently, successive Railway Annual Reports reiterated that nothing short of an independent Renewals Fund and/or total separation of Railway Accounts from that of

the Colonial Treasury would ensure that current and future needs of the railways were adequately provided for. It was argued, for instance, that in other Colonies, such as the Federated Malay States and Ceylon, where Government railways produced significant profits, such surplus funds were not only employed in improving existing lines, but were also largely responsible for major extensions of the networks. In the Gold Coast on the other hand, it was argued, net revenues were as high as 9.01 per cent by 1910, but railway buildings still remained the original temporary structures used for construction labour.¹² Hence, the implication was that, lack of managerial control over railway finances impaired improvements in the system. Such a situation would suggest that Colonial Officials tended to brush management's demands for improvements under the carpet. The railways seemed to them to be doing perfectly well so long as they continued to make profits. It is however, imperative that any such sweeping assumptions must be treated with caution. First, although financial policy was centralised in the Colonial Government, the General Manager had always been considered a senior member of the Executive Council which advised the Governor. Consequently, the railway administration was not entirely voiceless. Second, it would also seem that the railway management, at least in the early days, complained about their lack of power whilst at the same time did little in the form of practical proposals for improvement. This is illustrated by the fact that although the Colonial Office approved a sum of £12,800 in 1911 for capital improvements, especially the relaying of the western track,¹³ nothing immediately came of it and later on management blamed the delay on the outbreak of War. It appears therefore that on occasions, management simply used the issue of railway finance as a convenient

weapon in its struggle for overall autonomy in railway administration. Nonetheless, the system may not only have discouraged managerial initiative and foresight, but policies were also likely to be unduly influenced by political and administrative imperatives. Such considerations were to dominate official thinking after the war.

After the war, the issue of railway financial administration resurfaced. In 1921 for instance, Colonel Hammond reported on the Railways and concluded that the lack of a Renewal Fund for the effective maintenance of the system was handicapping the general development of the network. The report was particularly critical of what it described as the "neglect" of the western line beyond repair," as a result of which that line had to be reconstructed after the war at a cost of £1 million.¹⁴ Hammond had however, failed to point out that it was precisely the relaying of the western track that the Colonial Office had approved the capital expenditure of over £12,000 in 1911, and that the "neglect" he had described was due to a combination of managerial inactivity and war time interruptions rather than to lack of control over railway finance. Nevertheless, the report recommended that an annual contribution of about £100,000 should be paid into a Railway Renewal fund. This fund, under the management of the General Manager, was to be employed in providing for capital improvements and replacement of ~~delapidated~~ equipment. Although this recommendation was accepted and the fund established, matters did not change in any really significant respect, because the central administration remained in sole control of policy. This point is illustrated well by the fact that when railway revenues plummeted from 1929 onwards (partly as a result of trade depression and partly due to motor competition) the fund was actually suspended.¹⁵ The railways being

publicly owned, its fortune was inextricably tied to that of the Colonial Administration.

Nevertheless the 1920's also witnessed some of the most radical recommendations for changes in railway administration policy. In 1924, the whole issue of the administration of Crown Colony railways was extensively examined by a Committee appointed by the Colonial Office to inquire into Private Enterprise in British Tropical Africa. The report was critical of the control of the Railways by officialdom and recommended that all Railway Departments should be "de-bureaucratized and commercialised."¹⁶ In other words, railway budgets were to be totally separated from Colonial budgets. The upper tier of decision making was now to be the responsibility of locally constituted Railway Advisory Boards under the Chairmanship of General Managers. Such boards were to liaise with a Central Railway Inspectorate to be created in the Colonial Office which was to be manned by people with the appropriate technical skills rather than by bureaucrats. But although this report was radical it made no immediate impact on the administration of the Gold Coast railways. Thus throughout the period up to 1929 there was very little change in the management structure of the railways. However, the important thing about the 1924 report, and indeed the whole question of railway administration was the fact that all discussions centred around the problem of finding an appropriate organisational arrangement for a publicly owned commercial enterprise. Thus the railways were *inadvertently* grappling with an issue that was to become a common phenomena throughout post war Britain and the newly independent states of Africa.

MANPOWER: MANAGERIAL, TECHNICAL AND UNSKILLED

One of the principal and perhaps most difficult problems facing the managers of the Gold Coast Railways was that of staffing the railway system. As the network was constructed, a need for manpower arose at all levels, from the office of General Manager down to a large number of unskilled labouring jobs. The staffing problem first emerged with the opening of the Sekondi-Kumasi line, which an estimate of 1902 suggested would need a total staff of 1,444 men to run.¹⁷ By 1928-29 6,120 people were employed by the Railways Department. How to find and retain employees with levels of skill, training and experience appropriate to what was a complex and technologically sophisticated operation, in a country with virtually no prior history of industrially-oriented employment, was a constant issue facing the Colonial Government and the railway managers. A three-tiered structure evolved, reflecting the broad categories of manpower requirements - managerial and supervisory, clerical and technical, and unskilled manual. The first category of posts was filled exclusively by expatriate staff, recruited mainly from Britain. Clerical and skilled or semi-skilled technical positions were filled partly by European and other expatriate employees, but increasingly by locally recruited African employees, while manual labour was performed in the main by men hired on a casual or temporary basis. Comprehensive data on the composition of the workforce is available only from 1916 onwards (Table 8.1). Unfortunately, the categories in Table 8.1 - of European staff, permanent African employees, and temporary African workers - does not indicate precisely the function carried out by each, and can only be used as a rough guide to the three-tiered structure.

Table 8.1.

Railway Workers, 1916-1930

Year	No. of Europeans	No. of African Clerical & Unskilled	No. of African Labourers
1916	119	888	1758
1917			
1918	99	798	1625
1919	115	976	1797
1920	129	1083	2308
1921	136	1093	2568
1922-23	142	1228	2706
1923-24	141	1344	2801
1924-25	146	1484	3302
1925-26	163	1711	3047
1926-27	168	1686	2828
1927-28	185	1730	3426
1928-29	181	1658	4281
1929-30	169	1786	3107

Source: Gold Coast Blue Books, 1916-1929-30.

A reliance on expatriates for managerial and supervisory positions was probably unavoidable, given that the organisation and technology of the railway system had been imported wholesale from the United Kingdom. But in the years before the first world war it was not always easy to recruit such expatriates, not least because of health hazards in the tropics and the general shortage of railway skills at the time due to the world wide expansion of railway-building. In 1905, Mr J. Mansfield, a former permanent way inspector whose appointment had been terminated on the grounds of inefficiency stated on his return home that:

It is nothing less than murder the way the Railway is managed, and were there a better management, many of the Europeans that are buried would still be alive.¹⁸

There is little doubt that Mansfield was aggrieved by his dismissal from the Railway Service but the observation indicates that there were inter-related problems of health and managerial competence. These, it seems, rendered it difficult to recruit efficient expatriate staff, and in July 1905, a Crown Agents' Minute stated:

Within the last two years three separate officers had had charge of the Department and each had left the service more or less in disgrace, while the condition of the Department deteriorated badly.¹⁹

The following year a Railway Committee of Inquiry concluded that there was gross inefficiency amongst the expatriate staff generally, and the various departmental heads in particular. On the Committee's recommendations all sectional heads with the exception of the Chief Accountant were dismissed.²⁰

Part of the problem was that experienced railway managers and supervisors were in such short supply that the Crown Agents found them virtually impossible to come by. The solution to this difficulty was to offer higher salaries. Thus, in 1905, the salary of the Locomotive Superintendent was increased from £500 per annum to £700, rising to £900 after two years, with a twenty per cent duty allowance.²¹ Although the Colonial Government was hostile to the idea of paying higher salaries to railway officials, whom it considered inferior to administrative officers, nevertheless the evidence suggests that only by raising the levels of salaries, housing and leave entitlements was the Railway Department able, by the early 1920's to establish a relatively efficient corps of managerial staff. A high rate of turnover among expatriates gradually gave way to more permanent employment. This

is illustrated by the case of Mr Cozens-Hardy who came to the Gold Coast in 1901 as Assistant Surveyor of Roads, and was transferred to the Railway Department, as Assistant Engineer, in 1903. Three years later he became head of the Maintenance Section, a post he held until 1919, when he became General Manager of the Railways.²² Longer periods of residence by European staff became more common after the First World War, when health and living conditions were significantly improved. Men stayed longer in the Colony and began to bring their families to live there.²³

The costs of attracting and retaining expatriate staff were high. By 1920 the salaries of European employees, who constituted only 3.75 per cent of the total work force, took 44.33 per cent of the total wage bill. (See Table 8.2). A 1922 enquiry into the railway explained that:

A European in West Africa is a costly commodity; he costs the Railways anything from 80 to 100 per cent over and above his salary for every month he puts in, depending on whether he is on the twelve or 18 months rule for leave. He never costs less than 800 pounds sterling and usually at least 1,000 pounds sterling per year.²⁴

The costs of expatriate staff illustrates the observation that the skilled European in the tropical Colonies was "one of God's most expensive creatures on earth."²⁵

The Europeans employed by the Gold Coast Railways, although growing in number, declined slightly as a proportion of the total labour force between 1916 and 1929-30 as did the large section of the work force comprising casual manual labour. The most striking feature of change in the composition of the workforce is to be found in the rise

Table 8.2

Distribution of Railway Operation Wage Income
Total wages
of

Year	Total Number of railway workers	Total Wage Bill (ie both Salaries and Wages). £	European Staff as percentage of Total Railway Labour Force %	European Staff as percentage of total Wage Bill. %	African Permanent Employees eg. clerks, Signalmen as Percentage of Total railway Labour %	Total Wages of Permanent African Staff as percent of total wage bill %	African manual labour employed on temporary basis as percentage of total Wage Bill %	Total Wages of African manual labour as percentage of Total Wage Bill %
1916	2755	109,000	4.48	41.96	4.23	8.68	91.29	49.36
1917	-	-	-	-	-	-	-	-
1918	2522	112,000	n.a	n.a	n.a	n.a	n.a	n.a
1919	2888	109,000	n.a	n.a	n.a	n.a	n.a	n.a
1920	3520	159,000	3.75	44.33	5.31	13.28	90.94	42.39
1921	3791	196,000	3.58	37.82	9.11	18.13	87.31	44.05
1922-23	4076	200,000	3.38	40.58	8.46	21.96	88.16	37.46
1923-24	4186	226,000	3.32	34.11	9.17	22.36	87.51	43.53
1924-25	4932	246,000	3.77	32.11	9.24	23.22	86.99	44.68
1925-26	4921	258,000	3.77	30.59	9.67	23.31	86.56	46.1
1926-27	4682	267,000	3.46	32.56	12.36	28.10	84.18	39.34
1927-28	5341	269,000	3.20	34.26	10.26	28.67	86.54	37.07
1928-29	6120	274,000	3.02	37.33	9.11	26.23	87.37	36.44
1929-30	4539	279,000	3.17	37.29	14.98	28.07	81.85	34.64

Source: Gold Coast Blue Books, 1916-1929/30.

in the number and proportion of permanent African employees - up from 4.23 per cent of the total in 1916 to 14.98 per cent in 1929/30. The ratio of European to permanent African staff declined from 1:7.4 in 1916 to 1:10.5 in 1929/30. Although this trend cannot be measured before 1916, it would appear that the most pronounced change in the composition of the labour force from 1903 to 1929/30 was the emergence of a stratum of permanent African railway employees, engaged in a variety of occupations requiring some degree of skill and/or experience. How far was this development based upon the substitution of cheaper local manpower for more expensive imported skilled manpower, and how far was it based upon the shift from casual to more efficient permanent unskilled employment?

One possible solution to the manpower problem would appear to lie in the establishment of a staff development scheme such as the training of Africans both locally and abroad on a long term basis. Apart from the obvious advantages of better health and better knowledge of the environment, the training of the African to replace the European expatriate would also be more economical in the long run. As far as the managerial and supervisory grades were concerned, however, no such possibilities were ever contemplated. Part of the reason was that there was a great deal of racial prejudice regarding the placement of Africans in positions of responsibility. For instance, in 1907, when vacancies occurred in the Colonial Civil Service for which qualified Africans were available, the Governor ruled that natives were not to be appointed as District Commissioners and Magistrates because they would have little influence among their people.²⁶

As regards the middle stratum of railway employees - clerks, fitters, drivers, artisans, etc. - however, the authorities favoured the substitution of the African for the expatriate not least because of the cost and difficulty of obtaining such skills from abroad. Initially these skills were obtained from Britain and the West Indies. Black West Indians in particular were preferred to white expatriates not only because they could adapt to the climate and food more easily but also because they were less expensive. Wages for locomotive drivers in 1905 for instance, were £40 per annum for the African, £100 for the West Indian and £250 for the European. The lowest paid white man at the time received £250.²⁷ A proposed scheme in 1905 to recruit black West Indians on a large scale however, fell through partly because there was a general shortage of such skills in the West Indies itself, and partly too because West Indian Governments were opposed to the scheme.²⁸ Thus although a few such workers joined the Department they never constituted any significant proportion of the labour force. By 1908, no more than 7 West Indians were employed in the Central Workshop at Sekondi, and these were reported to be "doing good service."²⁹

In default of imported black West Indian skilled labour, the Railway Managers concentrated their efforts on creating an indigenous African skilled labour force. It proved easier to recruit and/or train people in the clerical and accounts occupations than in the artisan and technical jobs. This was not only because the nature of the Colonial education system suited "white collar" skills, but such skills were also readily available from the existing bureaucracy. Thus initially, clerical and accounts workers were simply seconded from the Treasury and other

departments of the Colonial Civil Service but increasingly, they were recruited from the growing army of primary school leavers.³⁰ This group of workers, it will be argued, were the most secure and most stable within the middle stratum of railway employees, making the Accounts and Traffic Departments relatively more efficient than others.

The creation of the technical and artisan class on the other hand, was much more problematic. One solution was to develop and increase the skills of existing construction labourers. The process had begun in 1902 when 32 men were "hand picked" from construction labour and with the aid of one West Indian Inspector and four Lagos sergeants, they had been trained to form the nucleus of a Railway Police Force.³¹ The following year, the Construction Engineers' Report stated that a greater number of such labourers including Nigerians had been offered permanent employment in the new Railway Department as locomotive drivers, signallers and fitters.³² Although exact figures are not available, the evidence suggests that the Railways, at least in the pre-war years, largely relied on the strategy of developing the skills of manual workers in meeting their technical skill needs. As early as 1908, the services of Europeans in the Railway Foundry had been replaced by Africans and two years later the General Manager reported that: "all the brass engine axle boxes being made entirely by native labour are running very satisfactorily."³³ By 1912, it had become evident that not only had the policy of substituting the African for the expatriate in the lesser skills attained a high degree of success but it also appeared that the Gold Coast was more advanced in this aspect of railway management than the other West African Colonies. A 1912 Report

observed:

The natives of the Gold Coast unlike those of Nigeria and Sierra Leone turn out, I am told very efficient drivers, fitters and mechanics. They are largely employed in driving trains, and to do much of the work in the shops,³⁴ which would elsewhere on the Coast be left to whitemen.

Although the policy of training manual workers in railway skills was thus a success, its main weakness as Guggisberg pointed out later, was that, such workers were unable to read or write.³⁵ Hence, not only were prospects of advancement restricted, but overall efficiency may also have been impaired. Consequently the emphasis shifted from improving the skills of manual labour to more formal training schemes.

As early as 1906, the General Manager submitted two proposals - one to train railway artisans abroad, and the second, to establish a Technical Training School, to produce skilled workers for the railways - but nothing immediately came of the suggestions.³⁶ Although an apprenticeship training programme was formally introduced from 1907, the scheme, at least initially, met with limited success. For instance, by 1921, no more than 8 trainees had successfully completed the course.³⁷ Part of the problem was that conditions of apprenticeship were initially unattractive. Boys of fourteen years of age for instance, who could read and write and had knowledge of arithmetic were to be employed as apprentice fitters, turners, blacksmiths and machinists in the Railway Workshops. The apprenticeship however, was long and poorly paid. Apprentices served first, a six month probationary period at 3d per day subsistence, then five years of training, after which they were to serve an extra two years before being offered employment. Cases of desertion, particularly to the mines were common. Following post

war labour unrests (See P223 below) however, conditions of apprenticeship significantly improved. The duration of training was now reduced to three years with daily wages at 1/6d for the first year, 2/3d for the second, and 3/- for the third. Regular Sunday classes were also introduced. There was a big response: by 1925 total apprenticeships had reached 85 with 15 on the waiting list.³⁸ Besides, at the time, a new source of recruitment of artisan skills had opened to the Railways, when the first batch of graduates - 3 carpenters and 3 metal workers - arrived in the Department from the newly established Technical Training School in Accra. These were described as "well trained, well disciplined, and have a satisfactory attitude towards their work."³⁹ Hence, as a result, Africanisation did occur in the lesser technical skills. For instance, by 1926, there were only seven European drivers as against 68 Africans in the Locomotives Department.

The recruitment and training of Africans in railway skills was however, only one step towards the creation of a permanent work force to run an efficient railway service. Just as higher salaries and improved living conditions promoted stability among the European managerial /supervisory staff, so too wage levels and the provision of fringe benefits determined the permanence of the African skilled workers. Although the management was aware and frequently commented on these problems they did very little in fact to improve conditions for the large majority of the African labour force. It will be argued, later that, such inactivity, largely stemmed from Colonial policy which advocated low production costs, and the fact that it was believed that certain improved conditions such as pensions would undermine management's control over labour.

WORKERS' GRIEVANCES AND LABOUR RELATIONS

In the absence of a coherent managerial policy regarding living conditions for the African skilled workers, such conditions varied from one place to another. At the smaller railway stations in the interior, some workers, especially the clerical occupations, were able to occupy houses (consisting of temporarily erected wooden and corrugated iron sheets) which had originally been used for construction labour. These houses were however, extremely basic and uncomfortable, and their maintenance costs were very high.⁴⁰ But living conditions appeared even more difficult in the urban areas which were springing up as a direct result of the railways and harbours. The populations were expanding in areas with little in the way of existing housing stock. Consequently, insanitary towns proliferated. Apart from the obvious social problems associated with such living conditions, the railway itself found that the efficiency of workers was impaired. The General Manager at Sekondi wrote in 1912:

This is an upstart town ... Houses are almost impossible for the new men to find, rents are exorbitant and incidentally, the cost of living is high ... At present the men live all over the place in wretched conditions, and when urgently wanted cannot be found.⁴¹

He requested that living quarters be constructed for the clerical and accounts staff for which a reasonable rent would be charged, but nothing immediately came of the proposal.

Wage levels and social security provisions also differed from one skill to another. The accounts and clerical staff experienced greater job security and better working conditions than the artisan and technical

group. The clerical workers were in an advantaged position because they had been seconded from other Government Departments and as such were already well entrenched in the Colonial bureaucracy. As early as 1907, a grading system, with fixed salaries and pensions had been established for the entire accounts and clerical employees,⁴² with the result that there was a relatively high level of stability among such workers. As the Chief Accountant observed in 1916: "there is more than one native who is distinctly qualifying for the highest rank of the civil service."⁴³

In contrast, managerial attitudes towards the technical and artisan workers was one of ambivalence. One problem was that, unlike the clerical staff, who had been able to establish their skills and secure their positions, the artisans were still acquiring their skills through training on the job. Once these skills were acquired, such workers were shifted from the daily wage rate of 1/- - 1/6d for manual workers to one of 2/6d for skilled workers. But payment remained on a daily basis, and the artisans were not salaried. Consequently, they were excluded from such fringe benefits as pensions, annual paid leave, and sick leave which accrued to the accounts and clerical occupations. Such conditions made the technical worker feel less secure in his job, and possibly helps to explain a higher turn over among such workers:

the native artisan failed to realise that railway work is a career and not work to be taken up for a year or two interleaved with other employments.⁴⁴

Consequently, in 1916, the General Manager stated that the provision of more stable conditions, such as pensions, were needed to give the

artisans "fixity of tenure and ensure their contentment and willingness to remain in service".⁴⁵ The Manager's proposals had been influenced by changes that had been taking place on the railways in other parts of British West Africa, whereby pensions had been introduced for all skilled railway workers who had spent seven years or more in the service in Sierra Leone, and in Nigeria a Provident Fund had been established for all workers.⁴⁶ Although discussion after discussion took place nothing seems to have actually materialised in the form of changed policy. Such inactivity was to have far reaching consequences for labour relations after the war.

The first significant industrial dispute on the Railways occurred in June 1918, when workshop mechanics at Sekondi laid down their tools.⁴⁷ The immediate cause of the conflict was related to the setting up in 1917 of a new railway workshop near Ketan, 3 miles outside Sekondi, to which workers had to be transported by train. When the works had been based at Sekondi, both the clerical and artisan staffs worked from 7.00am to 11.00am and 1.30pm to 4.30pm. However, following the move, hours for the clerical and accounts staff were changed to 8.00am to 2.00pm daily, without a lunch break. A request for similar hours from the artisans was turned down because "the work is never as efficient when the men do not have a break in the middle of the day."⁴⁸ The result, as one official put it, was that the mechanics saw the clerks' train "steaming away" shortly after they themselves had returned from their lunch hour break.⁴⁹ Discontent was aggravated still further when the mechanics were informed that their hours of work were to be extended by half an hour to finish at 5.00pm. They argued that because of the shortness of their lunch hour break, the majority were forced to return to work without eating, as there was

insufficient time to cook, while by the time they arrived back from work in the evening the markets and shops were closed.

These grievances, which turned upon differential treatment of "white collar" and "blue collar" workers led to the workshop mechanics declaring a strike on 13 June 1918. Management ordered the men to return to work on the promise that their grievances, once submitted in writing, would be considered. The strike (which was confined to the workshop mechanics), lasted for one week.

One significant result of the 1918 strike was that it triggered off a series of petitions from several sections of the labour force about working and living conditions. It thus appeared that the dispute over hours of work at Sekondi was merely a symptom of a general feeling of discontent amongst railway workers. The petitions all seemed to follow a similar pattern. They were mainly concerned with such issues as wage increases, pensions, annual and sick leaves, arbitrary dismissals, housing and promotion. However, when these complaints are examined closely, there seem to be two main problems at their roots.

The first, which has already been identified, was management's differential treatment of clerical and accounts staff as against their technical and artisan counterparts. Table 8.3 shows wage levels of the two categories of skilled railway workers in 1905 and 1918. While both minimum and maximum salaries for clerical workers nearly doubled over the period under review, minimum wages of artisans remained frozen at 2/6d - although once appointed, the latter received annual increments. In addition, the administration granted a "War Bonus" to all salaried staff which further aggrieved the non-salaried workers. One official summarised the position thus:

Ever since the railway clerks were given pensionable status, the man who wields the hammer claims to be put on the same footing as the man who wields the pen.⁵⁰

Secondly, inflation during the First World War led to a very high cost of living. By 1918, food prices in Accra were 50 to 60 per cent above the pre-war prices, while in Sekondi price increases were as high as 400 per cent (Table 8.4). Thus massive inflation was

Table 8.3
COMPARATIVE WAGE LEVELS FOR CLERICAL
AND TECHNICAL RAILWAY EMPLOYEES, 1905-1918

Date	Accounts/Clerical Staff		Artisan/Technical Staff	
	Minimum Salary (Probation)	Maximum Salary	Minimum Wage	Maximum Wage
1905	£25 to £40 p.a.	£150 to £200 p.a.	2/6d p.d.	3/- p.d.
1918	£48 to £72 p.a.	£240 to £336 p.a.	2/6d p.d.	5/- p.d.

Source:- Memorandum Suggesting Difficulties as Regards the Proposed Extension of Pensionable Rights to the Daily Paid Staff of the Railways, General Manager, Sekondi, 1919, Appendix XV in Report and Recommendations of a Committee Appointed to Consider the Conditions of service of Railway Native Mechanics, Sessional Paper No. XIX, 1918-19.

Table 8.4

Prices of Commodities at Sekondi

Commodity	Pre 1914 Price	Prices in 1918
Cassava	6 Big ones for 3d	3 small ones for 6d
Plantains	8 to 10 for 3d	3 to 4 for 3d
½cwt bag of rice	7/6	30/-
Kerosine oil per tin	3/6	10/6
Matches per packet	3d	1/-
Shirt	1/9d to 2/6d	3/- to 6/6d
Wearing cloth per piece	5/- to 9/-	15/- to 21/-
House Rent per month	5/- to 8/-	18/- to 20/-

Source:- Memorandum Suggesting Difficulties As Regards the Proposed Extension of Pensionable Rights to the Daily Paid Staff of the Railways, General Manager, Sekondi, 1919, Appendix XV, in Railway Mechanics Report.

occurring at a period of stagnant money wages, resulting in a drastic fall in real wages for the majority of artisans. Indeed one petition from Accra succinctly described the plight of railway workers who were forced to take goods on credit or borrow money from petty traders and money lenders, who were exploiting the situation. The result was a high incidence of indebtedness among railway workers.⁵¹

How then did the authorities respond to the workers' grievances? In November 1918 (six months after the mechanics' strike), the Government appointed a Committee of Enquiry under the Chairmanship of J. Maxwell, Commissioner for Western Province. (Other members were F. Cogill, Secretary for Mines Department, and L.G. Corney, President of the Mines Managers Association). Significantly, the main demands of the artisans - differential treatment of white collar workers and rising cost of living - were carefully excluded from the Commission's terms of reference. They were instructed to consider 1) How conditions of service of native mechanics on the railways compared with those of the mines and elsewhere for similar labour, 2) whether any, and if so, what appointments should be made pensionable, and 3) if not what steps could be recommended to give greater security to such workers. Both the limited jurisdiction of the Committee and its very composition - representatives of Government and mining companies, was to affect its findings.

The report of the Committee which was presented to the Government early in 1919 found that rates of pay on the railways compared favourably with those of the mines. Hence, they did not recommend any major improvements in pay. However, they did argue that

improvements in conditions were necessary and advocated several changes: 1) the provision of housing accommodation near the workshop for which a reasonable rent would be charged, 2) the introduction of night and travelling allowances, 3) granting of gratuities in cases of permanent disablement not resulting from the fault of the workman, 4) the system of dismissal and suspension should be modified so that in cases of long service each dismissal came before the General Manager, 5) the working hours in force prior to June 1918 should be restored and 6) the creation of 13 pensionable posts of Senior Locomotive Drivers, Leading Fitters and Artisans, and Workshop Foremen for African staff.

Clearly, the Committee did not achieve much: there were no general wage increases and the majority of artisans remained on daily wages. There seems to have been several inter-related reasons for this. First, the need for a permanent committed railway work force was contradicted by the need of management to have maximum control over labour. Thus the Committee recognised that in order to secure a more stable labour force and thus increase productivity, it was necessary to award pensionable status to those artisans who had served for seven years or more as had been the case on the Sierra Leone Railways since 1914. On the other hand, management objected because it would reduce their control over workers in that such employees would have increased security and could not be sacked on the spot. The newly promoted General Manager, Mr Cozens-Hardy explained to the Committee:

It is highly desirable that the powers of the General Manager relating to the employment and dismissal of the workshop staff should not be curtailed in any way which would certainly

be the case were any of them to be made pensionable and the difficulty will be to retain the former and at the same time ensure the artisans some fixity of tenure.⁵²

The General Manager favoured the establishment of a Provident Fund on the Nigerian model because it functioned as a control mechanism over workers in that workers became hesitant or even powerless to leave their employment whilst the railway administration was holding a portion of their wages. However, because of the high cost of living at the time, it was decided to defer the Funds' implementation. There is no record to show that this was ever implemented.

Secondly, the need for a permanent and stabilised work force also contradicted what appeared to be a Government low wage policy which aimed at minimising costs. For instance, the committee did consider the extension of the War Bonus to the non-salaried workers in order to meet the rising cost of living. However, the cost of implementation, estimated at £9,000 per annum was considered too high and the idea was dropped.⁵³ This was, in spite of the fact that, at the time, the railways were making handsome profits. Instead, the traditional African social economic system would continue to be used to supplement wage labour, so that employers would not have to pay the full cost of subsistence in the form of a living wage and pensions. As C.H. Harper, the Colonial Secretary, forcefully argued: "the native family stool, rather than pensions, should provide protection from destitution on retirement."⁵⁴

Finally, the relatively undeveloped labour market for artisan and technical skills - the Railways and to a lesser extent the mines - did very little to enhance the bargaining power of such workers. Thus,

whilst the Government refused to grant wage increases to artisan workers, on occasions it was prepared to respond to similar demands for wage increases for unskilled labourers. (see below).

So limited were the results from the commission of Enquiry, at a time of post war inflation, that it is not surprising that more strikes occurred from 1919 onwards. The 1919 strike was also started by the workshop staff at Sekondi but was rapidly joined by their colleagues in the running sheds, and power house, and by the crane operators at the dock. All attempts by the authorities to intimidate the strikers back to work failed, and the strike lasted for five weeks.⁵⁵ By 1920-1 strike action had spread to Accra and the outstations. However, Guggisberg who at the time was still calling the workers' demands "exorbitant", was committed to a hard line. As he later reported to the Colonial Office:

We had a practical cessation of all labour at the beginning of the year, 1921, owing to strikes by workers All employers of labour stood firm and artisans eventually returned to their work.⁵⁶

The wave of strikes between 1918 and 1921 represented a major problem for a management struggling to keep lines open and meet the needs of railway users. However, it achieved little for the workers involved. Most strikes were sporadic and short lived, and men returned to work without their demands being met. Two factors explain this lack of success. First, there was little solidarity and "group consciousness" among the workers themselves, so that each struggle was fought on an atomistic basis. During the 1918 strike, for example, all the locomotive drivers continued working, for which they were awarded a bonus.

Again in 1919, apprentices returned to work after one week on the promise of a bonus and improved conditions of apprenticeship. Furthermore, European workers were always more than willing to cover the duties of striking African workers. Second, the Colonial administration, which regarded strikes on the railways as a direct challenge to its authority was prepared to use coercion to break strikes. It was particularly encouraged to do so by an abortive attempt to derail a train during the 1919 strike at Sekondi. Leaders and pickets were constantly arrested, tried and convicted.⁵⁷ Because the employers stood firm, there were no wage increases for the technical/skilled railway workers between 1918 and 1921 - nor indeed over the entire three decades before 1929. Gains were limited to the change to salaried staff status for thirteen of the most senior artisans in 1919, which may have had the effect of reducing their "leadership" role in the strikes of 1920-21, and to the introduction of improved housing quarters. By 1923, some 103 new housing units had been completed,⁵⁸ and presumably helped to dispell some of the labour unrest.

The General Manager's Report for 1920-23, indicated that labour protest had subsided "and there was no appreciable shortages of labour as well as artisans during the year."⁵⁹ During the rest of the 1920's, there was no repetition of the strikes which had marked the years between 1918 and 1921. Why did labour unrest subside after 1921? It seems unlikely that the modest gains made during 1919-21 were enough to defuse the workers' sense of grievance. Although a definitive answer is not possible, it is more probable that the slackening of inflationary pressures in the Gold Coast economy,⁶⁰ together with a gradual acceptance of the decline in real incomes which had occurred during and immediately

after the war, underlies the more peaceful period of industrial relations from 1922 to 1929.

Despite the ~~difficulties~~ faced by the railway artisans, the most disadvantaged group of railway workers was the army of manual labourers, whose numbers roughly doubled between 1916 and 1929-30. Their living conditions were always poor. Because there were no houses for them, such workers had to construct their own huts out of grasses and palm leaves and initially these were built clustered around the station buildings on railway land. Not only were their conditions unsanitary, but such dwellings were also considered an eyesore to the travelling public. In 1917 therefore the Railways decided to ban all such huts from the immediate vicinity of station buildings and at Dunkwa, Jim Abufu, Edwadin, Bekwai and Kumasi, new plots were acquired and allocated to manual workers to re-erect their huts.⁶¹

Wages were generally low but also varied from one area to another. The most important influence on wage rates was competition for unskilled labour from other sectors of the economy, more especially the mines. In 1904, when the completion of the Western line, and the collapse of the gold boom led to a general contraction of demand for unskilled labour, the Railway Department reduced minimum wages from 1/3d per day to 1/- per day.⁶² However, by 1912 when the mines were once again paying as much as 1/6d per day for unskilled labour, the General Manager warned that unless wages were raised to at least 1/3d per day, the maintenance of the line would suffer considerably.⁶³ The following year the Government approved discriminatory wage increases. Permanent way gangs on the Sekondi line from mile 0 to mile 68, including Prestea, where competition was most acute, were granted 1/6d per day while

those on mile 68 to Kumasi received 1/3d. However, wages for non-permanent way gangs on the western line as well as the entire manual work force on the Accra line, remained pegged at 1/-.⁶⁴ Again, during the War time and immediate post-war inflationary pressures management was similarly prepared to respond to demands for wage increases for unskilled men. By 1920, the post war labour unrest among the artisans had spread to the manual workers when three stoppages of work were reported among the permanent way gangs. It was then found necessary to raise the price of ordinary labour from 1/- -1/6d to 1/9d per day throughout the system. Consequently, "one can (now) select suitable men who are worth the extra money."⁶⁵

Clearly, the existence of a relatively more sophisticated labour market for manual workers than their artisan colleagues explains managerial willingness to respond to the demand for wage increases for the former category of railway employees.

Although the post-war labour protests achieved little for the large majority of African railway workers materially, the period is nonetheless significant because it marked the emergence of workers organisations. The history of trade unionisation among Gold Coast railway workers has been extensively covered elsewhere⁶⁶ and, therefore need not be recounted at length here. In Colonial Africa, organisations often appeared first among railway and dock workers partly because skills acquisition had created permanence in employment and partly because the very nature of the job encouraged contact between workers.⁶⁷ In British West Africa although the formation of trade unions were legally permitted only in 1938, the roots of such

organisations on the Railways have been traced as far back as the immediate post First World War years,⁶⁸ and in the Gold Coast in particular, following the post war labour protests, railway workers made two major attempts to form unions - first in 1920 when an Artisan and Labourers Union was formed in Accra, and second, in 1923 when a Railway Workers Association was formed in the Locomotive Workshop at Sekondi, none of which, however, was successful.⁶⁹ In fact, as Chada points out, the activities of the latter organisation was limited to such issues as the provision of financial assistance to bereaved members, finding accommodation and credit for new employees and organising social functions such as entertainments. Thus throughout the 1920's, the emphasis remained on welfare provision on a co-operative basis rather than trade union activities in the real sense of the word. On the other hand, both Hughes and Cohen's work on Nigeria, and Conway's on Sierra Leone have indicated the development of much more permanent and stronger railway unions in those countries right from the early 1920's.⁷⁰ The question therefore arises as to why effective unions appeared on both the Nigerian and Sierra Leone railways at the earlier stage than they did in the Gold Coast?

One explanation, often stressed, is that the Colonial Administration in the Gold Coast was more antagonistic to trade unions than those of the other Colonies. For instance, in 1920, when the Colonial Office advised all Crown Colony administrations to treat workers organisations in accordance with the International Labour Convention of 1919, the response from the Gold Coast Government was evidently negative: Guggisberg cautioned the Secretary of State to "do nothing to hasten the growth of unionism."⁷¹ Not surprisingly, when the

newly formed Accra Artisan and Labourers Union demanded a solidarity oath of allegiance from its members, the Government promptly arrested and charged union leaders under African customary law for swearing an oath.⁷² The administration was particularly keen to suppress the nascent union because its leadership which had James Akrong, an Accra Journalist and a non-railway employee as General Secretary. Besides, the obvious political ambitions of the union included the establishment of branches throughout West Africa. Nothing was heard of the Accra Union after 1920. In Sierra Leone on the other hand, the authorities appeared more sympathetic towards the unions. For instance, there were no dismissals nor the use of coercion to break strikes during the post war labour unrests in that country.⁷³ Consequently, a Union was formed in 1919 which lasted throughout the 1920's. Although this explanation is highly tenable, the fact remains that when workers want to organise they do so irrespective of government policy. Indeed, no employer has ever encouraged the development of Unions. Historically they have always been frowned upon. Thus official attitudes alone cannot wholly explain the relative failures of the early Gold Coast railway unions. There are two other factors which may be important. First, the Gold Coast Unions, by concentrating on welfare co-operatives, may have provided a more tangible social security which the employer had failed to do. Consequently, workers may have become less inclined to take on what they viewed as an intransigent authority. The second factor revolves around the issue of pensions. In Sierra Leone and Nigeria, the provision of pensions policies in one form or another, possibly provided for the existence of a higher incidence of stability and group consciousness amongst workers. Whereas in the Gold Coast

only white collar occupations and a minority elite of the artisan group were offered such benefits. This may have had the result of pacifying the very people who would have been the possible leaders of a new Trade Union.

Whilst these early attempts at Unionism were largely ineffective, nevertheless, it is argued, they did much to develop the skills and leadership need for the unions that eventually developed at the eve of the Second World War.⁷⁴

CONCLUSION:

The system of railway management in the Gold Coast was based on the British model. But as the Gold Coast railways were publicly owned the upper-tier of decision-taking was not the Board of Directors to be found in a British Joint Stock Company, but rather the Secretary of State for the Colonies. In practice, however, most policy emanated from the Governor, who relied on the Crown Agents and Consulting Engineers for advice. The system had several inherent weaknesses. One was the slowness of information flow which led to delay and inefficiency, and was caused by the geographical and institutional separation of the bodies concerned in policy making. The major problem though was that of managerial autonomy, especially over the railways' financial administration. In the three decades before 1929, the railway was run as part of the Gold Coast bureaucracy which meant that its finances came under the direct control of the Colonial Treasury. Consequently, railway surplus earnings accrued directly to the central government. Expenditure on the railways was thus always dependent upon the financial

position of the Colony and the colonial Government's own priorities. Partly as a result of Management's objections to this procedure, there was a move from 1921 to separate it from the general administration and turned it into a self-contained service - though with no immediate result. The railways, being publicly-owned, found its fortunes inextricably tied to that of the Colonial Administration.

Another problem was that of staffing the railways. A three-tiered structure evolved, which reflected the broad categories of manpower requirements - managerial and supervisory, clerical and technical, and unskilled manual. Because the railway technology was imported wholesale from the United Kingdom, the skills to administer it had to be imported. Thus the managerial and supervisory positions were filled exclusively by European expatriates recruited mainly from Britain. But in the years before the First World War, it was not easy to attract such skilled workers, not least because of health hazards in the tropics. One solution was to offer higher salaries, better housing and leave entitlements to the European expatriates and as a result of which a high turnover gave way to a more permanent staff at the managerial and supervisory level - though the costs of maintaining such workers was very high.

However, the most pronounced change that occurred in the composition of the railway work force in the three decades before 1929, was the emergence of a middle stratum of skilled African workers. It was easier to recruit or train clerical workers than technical partly because the colonial educational system was geared towards white collar skills and partly too because clerical skills were readily available

from the existing colonial bureaucracy. But the railway authorities also pursued a policy of preferential treatment of white collar workers. Thus the clerical staff enjoyed higher salaries and better working conditions than their artisan counterparts, who were paid on a daily basis and were excluded from the fringe benefits of pensions, annual leave and sick pay granted to the clerical skills.

Such a preferential treatment experienced by white collar employees lay at the root of the post war labour unrests on the railways, especially among artisans, but to a lesser extent the manual labourers. The workers grievances were also exacerbated by the fact that wages remained stagnant at a time of massive inflation during and after the War, which resulted in a drastic fall in the standard of living of most artisans. Although the Railway authorities recognised the necessity to improve working conditions so as to ensure stability among the artisan work force, they failed to grant the workers' demand for higher wages and pensions because of the need to keep production costs low.

Finally, the 1920's also marked the emergence for the first time, of workers organisations on the Railways. Railway work was conducive to the development of Trade Unionism, as skills acquisition created permanent employment, as well as contact with other workers. But in the period before 1929, the emphasis was confined to a sort of voluntary "welfare" associations, rather than what would now be regarded as normal Trade Union organisation. Nevertheless, such early attempts at workers organisation on the railways may have laid the foundations for the future Unions.

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CHAPTER 9

OPERATIONAL PROBLEMS AND ISSUES

Although the recruitment of manpower and the conduct of industrial relations perhaps constituted the largest set of problems facing the railway managers, the managerial and technical staff were also called upon to solve a wide range of problems relating to the day-to-day operations of the system. Although more mundane than issues relating to manpower, these difficulties demanded no less attention if the network was to function smoothly and efficiently. Broadly speaking, there were three principal areas of operational concern - safety and maintenance of railway stock and track, tariff regulations, and general efficiency.

SAFETY AND MAINTENANCE

The Gold Coast Railways had a relatively poor safety record. Accidents were commonplace and frequently resulted in fatalities. (Tables 9.1 and 9.2 respectively provide data on the safety record and working expenses in the major spending Departments of the railway). Several points can be made about both tables. First, the incidence of falling trees, (although the largest single cause of accidents when the railways were first opened), rapidly declined from a peak of 261 in 1909 to a mere 3 by 1917. Second, the number of accidents resulting from derailments increased from 54 in 1905 to 121 in 1923/4 - (which was the last year for which the data was gathered). As a ratio to total mileage worked, as the system expanded over time, it appears that the problem of derailments, although fluctuating, actually worsened by the

TABLE 9.1

Major Causes of Accidents and Numbers of Fatalities on the Railways

Date	No of accidents caused by Fallen trees	Ratio of Fallen Trees to Number of miles open	No. of accidents caused by derailments	Ratio of derailments to Number of miles open	No. of accidents caused by Engine failures	Ratio of Engine Failures to No. of miles	No. of Fatalities
1905	146	1.2(miles)	54	3.1(miles)	36	4.7(miles)	7
1906	95	1.8	41	4.1	16	10.5	12
1907	195	.9	59	2.8	20	8.4	2
1908	230	.7	39	4.3	3	56.0	11
1909	261	.6	24	7.0	1	168.0	14
1910	112	1.5	49	3.4	5	33.6	4
1911	56	3.4	65	2.9	27	7.0	11
1912	62	11.1	78	2.8	20	11.1	7
1913	na	na	na	na	na	na	na
1914	46	4.9	92	2.5	19	11.9	14
1915	30	8.2	71	3.5	6	40.8	9
1916	6	41.3	74	3.4	10	24.8	9
1917	3	89.3	96	2.8	17	15.8	7
1918	na	na	na	na	na	na	na
1919	3	89.7	78	3.4	24	11.2	5
1920	-	-	92	2.9	31	8.7	10
1921	-	-	140	2.0	54	5.1	7
1922-3	2	167.0	211	1.6	65	5.1	4
1923-4	-	-	121	3.1	37	10.2	8
1924-25	-	-	na	na	na	na	16
1925-26	-	-	na	na	61	6.5	9
1926-27	-	-	na	na	na	na	10
1927-28	-	-	na	na	36	13.3	16
1928-29	-	-	na	na	41	12.1	13
1929-30	-	-	na	na	na	na	12

Source:- General Manager, Railways Annual Reports, 1905-1929/30.

Table 9.2

WORKING EXPENSES IN THE MAJOR SPENDING DEPARTMENTS OF THE RAILWAYS, 1904-1930.

Date	Proportion of Expenditure on track maintenance to total working Expenses	Proportion of Expenditure on Locomotives and Railway stock to total Working Expenses	Others (Traffic) Administration, & Miscellaneous	Proportion of Railway Renewal Fund To total Working Expenses
1904	44.3	32.64	22.93	-
1905	39.89	35.96	24.15	-
1906	36.21	25.45	28.34	-
1907	38.26	35.14	21.16	-
1908	39.11	33.85	27.04	-
1909	35.76	44.67	16.57	-
1910	37.70	37.02	25.28	-
1911	36.24	39.65	24.11	-
1912	34.21	40.03	25.76	-
1913	33.59	42.15	24.26	-
1914	31.02	45.09	23.93	-
1915	30.96	45.21	23.85	-
1916	30.58	42.45	26.97	-
1917	na	na	na	-
1918	29.07	46.24	24.69	-
1919	28.64	48.17	23.19	-
1920	18.69	60.40	20.91	-
1921	19.11	54.71	25.38	-
1922-23	19.85	46.88	33.27	-
1923-24	16.59	37.96	27.36	18.9
1924-25	18.05	37.91	26.51	17.53
1925-26	17.37	37.84	27.56	17.24
1926-27	17.65	37.48	27.32	17.55
1927-28	17.63	37.77	28.61	15.99
1928-29	na	na	na	na
1929-30	na	na	na	na

Source: General Manager, Annual Railway Reports, 194-1929/30.

early 1920's - 1:3.1 in 1905 and 1:1.6 in 1922/23. Expenditure on track maintenance - which also had the most direct bearing on the problem of derailments (poor track) - showed a continuous downward trend from 44.43 per cent of total working expenses in 1905 to below 20 per cent by the 1920's. Thirdly, the number of accidents caused by engine failures fluctuated strongly both in absolute terms, and as a ratio to total mileage worked - although the latter also improved from 1:4.7 in 1905 to 1:2.1 in 1928-9. Significantly, expenditure in the Locomotive Department - which also affected the problem of engine failures - rose from 32.64 per cent of total working expenses in 1904 to as much as 60.40 per cent by 1920, after which it came to settle at around 37 per cent between 1923-4 and 1927-8. How do we explain these trends?

As observed in Chapter 7, the problem of trees falling on the track had two main causes - first, the inherent problems of constructing a railway through a tropical rain forest, and second, a lack of foresight on the part of planners in failing to acquire sufficient land on each side of the track on which all trees could be felled. The problem first appeared with the opening of the Western line where as many as 45,000 trees along the line constituted a danger.¹ This problem was at its most acute during the tornados of April-June: "in one tornado 56 trees fell across the line in one locality, wrecking sixteen miles of track and telegraph lines."² The solution was the decision in 1908 to secure more land on each side of the track on which all trees were to be felled, making this one of the most easily solved problems.

But perhaps a more familiar safety concern than falling trees

was derailments. The widespread incidence of derailments on the railways had several causes. First, the tracks were badly laid, due to the fact that the terrain which had to be covered was difficult, and secondly, (as we have noted in Part I) incidences of shoddy construction were frequent. As the General Manager stated in 1904:

The soil through which the railway passed whilst standing well in cuttings was generally friable on banks and wastage under tropical rains is heavy.³

On one occasion, a bank sunk whilst a train was passing over it - although it had been tested only one hour previously.⁴ One solution was to reballast the whole line. The original shoddy ballast which consisted of laterites had to be replaced with broken stones and gravel. Another solution was to plant specific types of grasses which had the ability to protect the tract from erosion: "Lemon grass forms an almost perfect protection to the cress of the bank" and "bahama grass binds the soil well but has the tendency to get amongst the ballast from which it is difficult to eradicate."⁵ Similarly, sweet potato were planted alongside the line to inhibit the incessant penetration of the bush onto the track. Although this was necessary to reduce bush cutting, "where allowed to grow up to the edge of embankments, it has some small effect in lessening wastage and protects cuttings from rain-scour."⁶

Another major factor responsible for the problem of poor track and consequently derailments was related to over utilization of railway capacity. The railways, especially the western line, were originally designed to carry light traffic. But as the system expanded,

both in length and in terms of traffic, so the track proved inadequate. Thus by 1913 when locomotives and rolling stock of heavier capacity were introduced on the lines, "it was found that the tracks got much displaced."⁷ Consequently, speeds had to be severely curtailed to 10 miles per hour. The problem was further aggravated during the war when both funds and materials were no longer available for track and general maintenance.

At the outbreak of hostilities in 1914, the Colonial Office instructed that surplus Colonial revenues should be used in subscribing to interest free Imperial War Loans. By the time the War ended, the Gold Coast's subscriptions had totalled £500,000. This was in addition to the Colony's £20,000 annual voluntary contributions in aid of the war.⁸ The effects of such measures was to starve an already strained railway system of much needed funds. Furthermore, the shortage of materials, especially metal products during the war accentuated the problems of railway maintenance. Thus the railways were forced to experiment with locally produced wooden sleepers instead of imported steel but the former was found unsuitable because red ants destroyed them.⁹ In fact, throughout the war, existing sleepers, rather than being replaced had to be turned over to present the unworn sides to the **rails.** Thus by 1917 the General Manager reported:

Sleepers between Sekondi and Tarkwa, and to a lesser extent beyond Tarkwa, are so heavily corroded, especially under the rail-seating, and in some cases have bent or even broken under traffic. On certain worst lengths, sleepers have become so weakened that it is no longer possible to lift and pack the road, as the up bending of the sleeper-ends dangerously tightens the gauge or breaks the sleepers.¹⁰

Consequently, by the end of the war, the western line was in such a

state that repair was no longer possible, and the whole line had to be reconstructed. This war time deterioration explains the dramatic rise in derailments that took place during the early 1920's. The reconstruction lessened the incidence of derailments from 1924-5 onwards and helps to explain the sharp decline in the cost of track maintenance during the 1920's.

The third major cause of accidents, and perhaps the one for which management had been unable to find a permanent solution throughout the three decades before 1930, was that of engine failures. Frequent engine failures had several causes not least the difficulty in attracting experienced locomotive engineers - especially during the period before the war. Thus a simple change of fuel in 1904 from coal to firewood ruined the engines.

Lack of regular water supply, especially during the dry seasons, was another problem. Although water trains were run to supply designated filling stations, the practice proved expensive, and often unreliable, with the result that locomotives frequently either ran out of water or had to use dirty water.¹¹ It was only by drilling wells along the lines and the commencement of urban water work programmes after the war that the water problem was ameliorated.¹²

In spite of such improvements, deficiencies in locomotives remained a fairly persistent problem throughout the 1920's. One difficulty was that there were such seasonal shortages of locomotives and railway stock, especially during the main cocoa seasons, that not only were locomotive capacities frequently exceeded, but during such periods, it was simply impossible to withdraw the engines into

the workshops for servicing. These problems were further exacerbated by the fact that locomotive maintenance involved the most complex and technologically sophisticated aspect of railway operation - which required workshops, machinery, electricity power; all of which became generally available only towards the end of the 1920's.¹³ Thus not surprisingly, the maintenance of locomotives and rolling stock absorbed the lion's share of 40 per cent of annual recurrent expenditure.

But while problems associated with track and railway stock maintenance were probably unavoidable there also seemed to be a noticeable lack of initiative on the part of the authorities regarding general safety precautions. As early as 1904, the General Manager reported an incident involving an excursion train full of Ashanti Chiefs and their entourage which had run out of control down a slope for one mile, and warned that unless safety measures were adopted to alleviate the frequent accidents on the railway, its popularity among the Africans would suffer considerably.¹⁴ He wanted the provision of automatic vacuum brakes and lighting systems. Such improvements would not only ensure the safety of the trains but would also make it possible for traffic to run at night. However, the Crown Agents seemed more concerned about minimising operating costs than safety per se. Thus the General Manager was advised to adopt manual braking systems so that, one brake boy running between two vehicles would be responsible for stopping the wheels "by placing pieces of wood in front of them."¹⁵ Besides, such brake boys would undertake the handling of traffic and other station duties thereby reducing resident manpower requirements at railway stations.¹⁶ There was also a need for a standard code of signalling and the widespread use of

railways as footpaths by traders and carriers along with the use of shunting and marshalling yards as thoroughfares for passengers was also a safety risk. Although management was aware of, and frequently commented on, these problems, they did little to improve the situation. Thus as late as 1912 when Cruikshank arrived in the Colony as the new General Manager of the railways he was shocked by the neglect of safety precautions:

I have already referred to the tortuous nature of the railway, and for this reason alone it is to me surprising that engines and rolling stock are not fitted with continuous automatic brakes. Practically all the stock of every other railway is so equipped, and here we have a most difficult road through dense bush with sharp curves and heavy grades, the danger of falling trees, the railway treated by natives as a public thoroughfare and no means of quickly stopping trains.¹⁷

Although by 1916 the trains had been provided with automatic brakes, and a uniform code of signalling had been established throughout the system,¹⁸ it was not until the 1920's, when the incidence of accidents involving motor traffic became prevalent, that there was any talk of establishing level crossings.¹⁹ Furthermore, although the railways had become thoroughfares for pedestrians no fences were erected. Admittedly, inquests were held into all fatalities on the railway, but no real blame was attached to railway management or employees.

TARIFF POLICY:

Safety and maintenance were of major importance for the smooth running and efficiency of the railways, but attracted little public interest. The issue of tariffs, by contrast, could not escape public attention. After all, railway rates had direct implications for the wider public. This section identifies the main determinants of tariff

policy, and considers the degree to which the expatriate mining and commercial interests influenced the setting of rates for traffic.

The main factors that influence traffic development on a railway are the existence of competition and the rate levels. In the Gold Coast, there were at first no major competitors, apart from traditional headloading. Consequently, it would seem, that the railways enjoyed a near monopoly. Initially, railway tariff rates in the Gold Coast were relatively high, especially when compared with those of the other British West African railways. In 1903, three classes of passenger fares were charged: 5d per mile for first class, 2d for second, and 1½d for third - though the latter was not immediately implemented because it was thought that all African users would be employed by the mines or trading firms, to whom the second class rate was aimed.²⁰ Goods traffic was similarly classified into three classes which were charged at the rate of 2/6d per ton mile for the first, 1/8d for second, and 1/- for the third.²¹ Clearly such rates compared unfavourably with Nigeria's 9d, 6d and 3d per ton mile for goods traffic and 9d, 6d and 4d on the Sierra Leone railways.²² It must be noted, however, that construction costs were higher on the Gold coast - an average of £10,314 per mile compared to Nigeria's £7,064 and the Sierra Leonean narrow gauge which cost a mere £4,316 per mile.²³ Furthermore, the Ashanti Goldfields Agreement of 1901, (under which the Western line was extended to Kumasi) stipulated that railway rates were not to fall below a minimum average of 15 pence per ton mile.²⁴ The average for 1903 was 19.69 pence per ton mile²⁵ but by the following year it had fallen to 15.06 pence because of a developing traffic in "bush produce" which was charged at low rates.²⁶ At 15.06d per ton

mile the railways could not revise rates without contravening the Ashanti Goldfields Agreement. Consequently, the authorities became keen to abrogate the agreement so as to allow railway officials a free hand in tariff policy. This became all the more urgent because the administration were under pressure from several quarters to reduce rates. After a lot of wrangling on the part of the Corporation, the agreement was finally abrogated in April 1905.²⁷

As early as 1903, the London Chamber of Commerce had made representations to the Colonial Office that not only should raw materials for export be charged at a low rate of tariff, but also capital imports, such as machinery and boilers for the mines, because such goods increased the productivity of the Colony. The Chamber noted the higher rates in the Gold Coast compared with Nigeria and Sierra Leone and called for a general reduction. It argued that Government personnel and stores, (which under the Ashanti Goldfields Agreement were charged at the cost of conveyance), should henceforth attract the same rates as public traffic, because the administration had already reaped the political and administrative benefits of the railways.²⁸ In the following year, thirteen mining companies operating in the Colony banded together to further press the Colonial Office for rates reductions, especially on fuel. They argued that existing rates of 5d per ton mile for coal and £2 per truck load of firewood (distance unspecified) were too high and demanded that coal be carried at 1d per ton mile whilst that of firewood be halved. The mines threatened to withhold all shipments from London until their demands were met.²⁹ Official response was varied. The Consulting Engineers warned that if coal were to be carried at 1d per ton mile as the mining industry insisted, the

railways would suffer great losses, and that it would even be unprofitable to carry it for 1½d per ton mile.³⁰ The General Manager argued that ocean rate charges were the problem and not railway rates. The more the railways reduced rates the more the shipping companies would take advantage to increase theirs. Furthermore, he argued, firewood tariffs could not be reduced because firewood loads caused heavy wear and tear on the wagons, and necessitated Sunday labour which was paid at a higher rate.³¹ Governor Rodger's response was, however, to assure the mining companies that their interests would be promoted as far as possible by cheap railway rates as this was necessary for the economical mining of low grade ore which was common in the Tarkwa districts.³² But the Governor also cautioned that the intention was not to go to the extent of actually subsidizing the mines. Although the administration might be willing to consider employing differential rates involving the cross subsidization of one traffic by another in order to promote particular industries, such preferential rates would not necessarily fall below levels that were considered "uneconomic". Subsequent developments however were to prove otherwise.

Apart from the mining lobby, pressure also came from portering competition for a downward revision of rates. Broadly speaking there were two aspects to the competition. First competition over short distances was met by the introduction of 1d per mile day market return tickets in 1904, to encourage the use of the railways by the petty traders who had turned railway tracks into footpaths.³³ Secondly, long distance competition (especially in spirits and rubber) was experienced on the routes to and from Ashanti. Ashanti Chiefs and traders still sent their carriers down the coast with rubber to return with spirits which they carried at 4s per case of twelve bottles as against 12s charged by the railways.³⁴ Consequently,

European traders complained that they were unable to compete with their African counterparts in the Ashanti and Northern Territory markets. Besides, the revenue prospects of the railways was impaired. For instance, out of 77,016 gallons of gin imported into Sekondi in 1904, only 18,300 gallons were carried by rail, the rest were carried by headloading.³⁵

One of the earliest efforts to counteract long distance portage competition and to attract traffic onto the railways was through the establishment of traffic agencies (working on a commission basis), which collected goods and transported them by carriers or wheel carts to the railways. Some of the most important agencies were located at Asafo (Cape Coast-Kumasi trade route), Atebubu (Ashanti-Volta River trade), and Sefwi, to collect rubber and palm produce that went to the ports of Saltpond and Cape Coast. They quoted through rates from the points of collection to the final destination.³⁶ Although such agencies did much to attract traffic to the railways, tariffs remained the most crucial factor in traffic administration.

In July 1905, following the abrogation of the Ashanti Goldfields Agreement, railway tariffs were radically restructured, and a new schedule of rates was introduced. (Table 9.3). Apart from periodic alterations the basic features of the new tariff structure remained in existence throughout the period before 1930.

Perhaps the most important feature of the new policy was a general reduction in rates by lowering all goods by one class. The principle of taper on rates, (ie the longer the distance the cheaper

Table 9.3

SCHEDULE OF TARIFFS, 1905

	1-50 miles		51-100 miles		100-150 miles		151-	
	s	d	s	d	s	d	s	d
Special Class I Rates: Brandy, Gin, Wine and other Spirits	3	9	3	9	3	9	3	9
Class I	2	6	2	3	2	0	1	9
Class II	2	0	1	3	1	3	0	10
Class III	1	3	1	0	0	9	0	6
Class IV	0	5	0	4½	0	4	0	3½

Source: General Manager, Railways Report, 1905, P.25

the rates), was also introduced to promote long distance traffic. Furthermore, the techniques of scientific costing were now more rigorously applied in the re-classification of goods. Three additional classes were introduced, making a total of six. For instance, goods that weighed little but occupied a large amount of space were charged at a higher rate than those with a heavy weight but taking little space. Goods were also charged according to "what the traffic can bear." That is to say, higher value goods such as bullion or perfumes attracted higher tariffs than bulky low value goods such as timber. But perhaps the most striking application of the principle of differential rates was the reduction in rates for mining and mercantile interests. Rates on coal were reduced from 5d per ton mile to 8/- per ton up to the first 50 miles, and 1d per ton mile beyond, and firewood rates halved from £2 to £1 per truck, whilst non mining firewood traffic attracted the ordinary class five rate.

Similarly, special low rates were introduced for direct shipment of rice, sugar, cotton goods and other imported provisions

from Sekondi to Kumasi, which was intended to promote the activities of the newly established expatriate trading firms in Ashanti and to a lesser extent the Northern Territories.³⁷ Finally, special low differential rates were also introduced for "Down" or Export traffic, which had hitherto been conspicuously absent on the railways. In 1904 the average carrying capacity of a train was 16-17 tons and on this basis it was calculated that trains were loaded up to 36.97 per cent of their capacity in the "Up" direction as against a mere 8 per cent for "Down".³⁸ It is obvious that trains returned to the coast empty. To remedy this situation, foodstuffs and other export produce in the "Down" direction were charged at lower rates.

But how does one account for the existence of severe portering competition for spirits, and the fact that such traffic remained the most highly rated on the railway, and to which the principle of taper on rates did not apply under the 1905 tariff changes (Table 9.3)? The main explanation for the apparent anomaly is that the revenue needs of the railways were constrained by a long standing agreement among the Colonial powers to discourage the consumption of alcohol by the imposition of high customs and railway tariffs. Thus although railway management included rate reductions on spirits in the 1905 proposals, the Colonial Office was hesitant to approve it.³⁹ It was not until 1906 that a compromise was reached whereby a 25 per cent reduction was effected on the condition that the commodity would not find its way to the Northern Territories,⁴⁰ presumably because of the prospects of utilising the region as a labour reserve.

In spite of these wide ranging changes in tariffs the issue of

railway rates remained alive. The activities of the expatriate interests (especially the mining companies) mainly ensured this; for their interests conflicted with management's perception of sound commercial principles in rating policy. In fact, like the issue of financial administration (see Chap. 8), tariffs on mine traffic resulted in a triangular conflict between railway management, the Colonial Administration and the Colonial Office. Although rates on coal had been considerably reduced and that of firewood halved in July 1905, this concession did not satisfy the mines, who argued that nothing less than a flat 1d per ton mile for coal was acceptable.⁴¹ But the Consulting Engineers reiterated their warning that any such further reductions would be uneconomic.⁴² However, under constant pressure from the expatriate lobby in the Legislative Council, the Governor instructed the management in December 1905 to introduce rebates on coal traffic.⁴³ Nothing immediately came of the instruction. The General Manager insisted on guarantees from the mines that specific volumes of traffic would be forthcoming before the issue could be considered any further.⁴⁴ Consequently, the tariff lobby renewed their pressure on the Colonial Office for lower rates. Railway rates were discussed in the British Parliament in 1907, where it was pointed out that they were higher in the Gold Coast than in any other Colony. Although the Secretary of State for the Colonies rebutted such arguments by pointing to the Gold Coast's higher construction costs, he indicated that reduced rates were in the pipeline.⁴⁵ By 1909, in fact, the rating issue had resulted in the establishment of a Joint West African Consultative Committee comprising representatives of the West African mining and commercial lobbies, the Colonial Office, and the Crown Agents. This excessive influence of business interests

over colonial policy attracted criticism, one member of the Colonial Office staff tersely remarking that: "in adopting this method we fly in the face of all previous experience, and adopt all that has been found to work badly many years ago."⁴⁶ Nevertheless, with the establishment of this Committee, the railway managers lost control over rating policy. Henceforth, their influence was limited to vociferous, but ineffective attacks on decisions introduced from London with little prior consultation with management.

In 1910, the General Manager complained that coal was carried at a "positive loss" because of liberal rebates granted to the mining companies.⁴⁷ By the following year, the Railways were for the first time, able to arrive at an approximate tonnage of firewood carried to the mines. This amounted to 81,364 tons, or 44.38 per cent of total goods traffic. In terms of revenue however, the traffic produced a mere £3,523 or 1.6 per cent of gross goods receipts. But firewood traffic was both difficult and expensive to handle, involving the laying of several miles of shunting tracks along the main lines, and that of coal required special port facilities. Consequently, management argued that "uneconomic rates" had been imposed.⁴⁸

Despite managerial concern 1912 saw yet another general reduction in rates for goods traffic, fuel, specie and bullion for the mines, as well as the introduction of privilege tickets for expatriate mining and mercantile employees along with ministers of religion.⁴⁹

The railway managers objected to the downward movement in rates. They argued that lower rates did not necessarily lead to higher

demand and as a result, the railways did not benefit from economy of scale. Thus contrary to expectations that reduced rates in 1912 would augment traffic, total goods tonnage for the year actually fell by 9,845 tons over that of the previous year's, and gross goods receipts fell from £213,507 to £199,124. The most conspicuous decrease was in firewood traffic for the mines which fell by 9,708 tons to 71,566 tons in 1912. Furthermore, a counter-balancing increase in the volume of coal and patent fuel did not occur, coal tonnage being 949 tons less than that of the previous year. Finally, it was argued that where reduced rates had resulted in increased tonnages (as it did in the case of imported provisions - which rose by 733 tons in 1912 but still producing £2,258 less than the previous year's) such lower rates did not result in a corresponding reduction in the cost of living.⁵⁰ The implication was that reduced railway rates benefited the expatriate mining and trading firms whilst the railways suffered and prices of goods in the Colony remained high.

But were the railway managers entirely right in their criticisms? The overall financial position of the railways and the continuous growth in traffic would appear to justify low rates. Between 1908 and 1914, goods traffic rose from 47,629 tons to 258,627 tons which amounted to more than 500% increase, whilst the number of passengers carried more than quadrupled - from 110,003 in 1908 to 527,001 in 1914. During the same period gross earnings rose from £151,423 to £383,009 whilst net revenue trebled - from £76,209 in 1908 to £208,919 in 1914.⁵¹ But these figures conceal the expansion that was taking place in the railway system, especially the opening of the Eastern line which by 1914, carried 46,830 tons of the gross goods traffic for

that year and produced £66,570 of the total goods earnings. But even so, traffic on the Western line in 1914 also showed an increase of 18,919 tons and yielding £9,450 more than that of the previous year.⁵² It would thus seem that management's criticisms were based on one specific year and fail to take into account the longer trends. Nevertheless it will shortly be argued that there indeed seems to be little correlation between rate levels and traffic development.

With the outbreak of War in 1914, the administrative infighting that had characterised tariff policy subsided although certain important changes did occur. The Imperial Government's financial demands on the Gold Coast at the outbreak of war meant that the Colony had to find ways of broadening its revenue base. Customs tariffs had been increased just prior to the War, and in any case the prospects of customs revenue depended on the availability of shipping space over which the authorities had little control. Railway rates on the other hand had been considerably reduced in the years before the war and although railway revenue also depended to some extent on foreign trade it was nonetheless considered more reliable than customs. Consequently, the railways were called upon to meet the financial needs of the metropolitan war economy: a 15% war surcharge was imposed on all passenger traffic and imported goods while cocoa exports attracted a 50% tax.⁵³ Significantly coal, firewood and general mining traffic were exempted from the surcharge. The results of such measures can partly be seen in the War time financial performance of the railways: Gross receipts more than doubled from £383,009 in 1914 to £737,362 by 1920 - producing net revenues of £174,065 and £365,309 respectively. More importantly, such increased rates did not discourage the growth

of traffic. On the contrary, total goods tonnage increased from 258,600 tons in 1914 to 371,400 tons in 1920 whilst the number of passengers carried rose from 527,001 to 1,334,286. Cocoa which bore the brunt of the tariff increase - 50 per cent - nearly doubled from 52,000 tons in 1913 to 92,000 in 1917.⁵⁴ Admittedly the extension of the Eastern line to Tafo in 1917 partly accounts for the traffic growth. For instance, out of the 22,000 tons rise in cocoa tonnage in 1917, the Accra line accounted for practically 16,000 tons, "but the Sekondi railway also showed a gratifying increase" and "had conditions been at all normal the total exports would have been very heavy indeed."⁵⁵ The fact of the matter is that, "there is a conviction held by growers that prices offered were too low and were bound to rise (after the war)" and "a quantity of cocoa was held up until unfit for sale."⁵⁶ Not surprisingly, when shipping space became available from 1919, and producer price for cocoa began to pick up, 176,000 tons of the beans were carried on the railways in that year alone.⁵⁷ It is thus evident that high tariffs during the war did not prove a disincentive to trade. This proposition was later confirmed by Colonel Hammond's Report on the Railways in 1921 when he stated:

That these rates, when compared without any qualification with the rates per ton mile charged on other railways in Africa are high cannot be denied, but the existing rates are not preventing the development of the export trade ... The point at which it will be necessary to bring in appreciable reductions in railway rates has not yet been reached.⁵⁸

The important point to note about all this is that, in the period up to 1920, the railways enjoyed a near monopoly in transport. Consequently the rate levels that were set were not so much influenced by either competition from alternative forms of carriage, or by managerial

Perception of sound commercial principles, as they were by the demands of the expatriate mining and mercantile interests, and the financial needs of the British war economy. These conditions would however, not remain for long.

During the 1920's traffic policy moved onto new grounds. The issue was no longer confined to rate levels, but also the need to adopt administrative actions in order to safeguard the interest of the railways against the development of competition from road traffic. The challenge from roads, more especially from lorry-freighting of cocoa and spirits, broke the railway's near monopoly of transport.

In the Gold Coast, motor transportation initially developed slowly. The first motor vehicle to arrive in the Colony was a paraffin-fired car, obtained in 1902 for the use of the Governor - Sir Mathew Nathan. However, this was a white elephant, languishing unused in the Government Secretariat until, during a clean-up campaign in 1908, it was carried out and thrown into the sea.⁵⁹ By 1908, a few lorries had been imported into the country but it was not until the years of the First World War that motor transport developed on a significant scale, partly because of the conditions on the railways at the time - high rates and poor maintenance - and partly too because of the introduction of the light American Ford lorries.⁶⁰ Although a Roads Department of the Public Works Department was established in 1910 to undertake the systematic reconstruction and bridging of main trunk roads, very little had been accomplished by the time the war broke out and caused government expenditure on roads to be "reduced to vanishing points."⁶¹ Thus before 1920, any progress made in road building was due mainly to the efforts

of Chiefs and their subjects, - especially in the cocoa producing areas. Road building by Chiefs and prominent cocoa farmers had begun in 1908 when several hundred miles of roads were reportedly constructed within the Eastern and Central Provinces.⁶² By 1920, no less than 1,300 miles of such motorable non-government roads had been completed in the Colony alone (i.e. not including Ashanti and the Northern Territories).⁶³ Because these roads were built in an ad hoc fashion by Chiefs and cocoa farmers, as and when they felt they were necessary, the system that developed did not follow the guidelines of the government's policy, which stressed that roads were to complement the railways (which it considered to be the principle arteries of communication) rather than to compete with them.⁶⁴ By the early twenties the railways were clearly under threat from motor traffic competition.

Road competition raised issues related not only to railway rates but also to the very nature of railway financial policy. One aspect of the dilemma was whether motor transport, (which was partly in the hands of European merchants, but was to a larger extent controlled by Africans), should be allowed to compete with, and possibly run down a government railway system which was financed by loans borrowed from the London money market. So here we perceive a conflict of interests between private, (mainly indigenous capital), and expatriate finance capital, as well as the colonial government's own needs for revenue. In 1922, Governor Guggisberg had explicitly stated his opinion on this issue when he said:

The critics of railway rates appear to consider that no profits should be made at all on government railways. It

opinion is that the profits should be reasonable, but I entirely disagree that no profits at all should be made in a country whose railways have been constructed by money borrowed from stockholders.⁶⁵

Clearly, the administration was committed to protecting the interests of the railways against the threat from motor transport competition. This became all the more urgent because at this time, Fakoradi was under construction, and the administration had to ensure that the railways transported maximum traffic to the harbour in order to make it viable (see Chapter 4).

In 1924, the Government established a Special Roads Department whose aim was to re-organise the road network in the Colony and Ashanti so as to make it complement rather than compete with the railways.⁶⁶ The Department's efforts were to result in the infamous "Road Gaps" policy, under which gaps were deliberately maintained in "strategic portions" of the road system so as to prevent lorries running on them. The nature, extent and unpopularity of the road gap policy is well illustrated by the General Manager's observations:

The policy is intensely unpopular with the unofficial communities, distasteful to the administration staff, and I trust that you will agree that it should be abandoned. Admitting fully that it is the duty of the government to see that its railway, on which some £8 million of capital have been spent are not allowed to become an undue burden on the tax payer it cannot, I think, be contended that government can properly continue to bolster up railway traffic by retarding the normal development of cheap communications ... a policy of road gaps which prevents the development of normal connecting roads, is in my opinion undefensible.⁶⁷

Apart from the unpopularity of the policy, the measure also proved grossly ineffective in curbing the incidence of motor competition. This is demonstrated by the General Manager's account of how gin was

transported to Kumasi in 1925:

Gin for Kumasi is being lorried up the Prahsu road to Brofoyedru, head loaded to Fomena over the three miles road gap, lorried from Fomena to Akrokeri, railed from Akrokeri to Bekwai, and then lorried to Kumasi.⁶⁸

As the Manager stated, "this is farcical but real."

Following the General Manager's criticisms the policy of road gaps was revised. Gaps were no longer maintained in the road system. Instead, certain traffics, especially cocoa and spirits were outlawed on specified roads. The aim was to allow the lorry freighting of passenger and ordinary foodstuffs and imported provisions, but not of cocoa and spirits which were considered vital to the revenue needs of the railways.⁶⁹

Alongside the administrative actions, the railway managers also responded to motor competition by a reduction in railway rates. But the question was no longer the rates to be borne by particular types of goods on the railway system as a whole, but rather the need to introduce differential rates between the three principal lines - differential rates that would reflect the geographical variations in the intensity of motor traffic competition.

Table 9.4

Rates on Cocoa Traffic on the Railways, Average Per Ton Mile
in Pence, Selected Years.

<u>Year</u>	<u>Western Line</u>	<u>Eastern Line</u>	<u>Central Line</u>
1922	7.87	7.87	na
1923	7.38	5.45	na
1927	7.92	5.00	na
1930	7.91	4.45	1.97

Source: Railway Revenue Committee, 32.

Between 1922 and 1930, rates on cocoa on the western line remained almost stationary at over 7d per ton mile while that of the Eastern line fell by over 40 per cent. But the most striking feature of the tariff structure is the comparatively low rate of 1.97d per ton mile on the Central Province line in 1930. The relative intensity of competition in a particular area determined rate levels that were set on the different systems. In Ashanti and the Western regions where railway development preceded roads, motor transport tended to feed, rather than compete with the Sekondi-Kumasi line. Consequently, there was no pressure for rates reduction on that section. In the Eastern Province on the other hand, road construction largely proceeded simultaneously with railway building with the result that it was not uncommon for the two systems to run parallel, and hence compete with one another.⁷⁰ This is well illustrated by the impact that the Accra-Nsawam road had on the movement of cocoa on the Accra line. Between 1924-25 and 1927-28, cocoa traffic by rail between Nsawam and Accra decreased from 91,643 tons to 51,780 tons. In the latter year, the motor road between Nsawam and Accra was closed down for reconstruction. This brought about an immediate increase in the tonnage which rose by 25,578 tons to 77,358 tons in 1928-29, but on the road being re-opened it quickly receded to 50,139 tons by 1930-31.⁷¹

But the system that faced the most severe competition was the Central line, a fact that was commented upon by the General Manager when he said they were threatened by "established competition". (see Chapter 4). In this case the roads actually preceded the railway, the construction of which had attracted criticisms from several quarters. Although rates were lowered in order to attract traffic to

Takoradi, the payment of harbour dues at the latter port also proved to be a disincentive since ships still called at the Central Province surf ports, where no dues were charged.⁷² The closure of the surf ports, which were tapping lorry-borne traffic of Central Province, was seriously considered, but abandoned because of expatriate mercantile and African opposition.⁷³

The competition between road and rail, particularly for cocoa traffic, was proving to be unequal on the Eastern and Central lines, and this raised serious questions about the future profitability of the Gold Coast railway system.

EFFICIENCY AND PROFITABILITY:

What were the implications of operational arrangements and tariff policies for the overall performance of the Railways? In other words, were the Gold Coast Railways efficient? Efficiency can be distinguished between conveyance of passengers and carriage of goods. Some measures of the former are given in Table 9.5a. This indicates that the ratio between the numbers of passengers carried and the haulage capacity of coaches generally deteriorated over time. Apart from the years immediately following the war, first class carriages, for instance, were rarely filled to more than 15 per cent of their carrying capacity. Although 2nd class coaches were fairly well loaded during the post war recovery - the highest level being 65.10 per cent in 1920 - a deterioration set in. The ratio between the number of passengers to carrying capacity quickly dwindled to a mere 5 per cent by 1925-26, after which it settled at around 9 per cent. Third class carriages by contrast, were often highly loaded - from

Table 9.5a

PASSENGER LOAD FACTORS (AVERAGE NUMBER OF PASSENGERS PER VEHICLE MILE)

Date	1st Class	2nd Class	3rd Class	Total
1915	14.22	22.72	87.80	94.50
1916	15.56	29.07	92.40	78.28
1917	na	na	na	na
1918	12.51	18.94	81.50	68.77
1919	25.95	52.72	101.12	97.45
1920	20.90	65.10	115.12	101.85
1921	13.85	35.31	95.38	80.23
1922-23	37.09	13.18	75.58	66.05
1923-24	19.08	10.96	58.93	51.81
1924-25	18.45	7.16	61.01	52.05
1925-26	12.77	5.32	52.88	44.09
1926-27	13.83	5.13	46.71	40.33
1927-28	12.29	9.59	50.85	45.56
1928-29	13.29	9.01	50.25	45.31
1929-30	10.07	9.38	43.99	39.62

Source: General Manager, Railways Report, 1915-1920/30.

87.8 per cent of carrying capacity in 1915 it rose to above 100 per cent during the post war boom. Clearly, third class coaches were being overloaded. Although the position later improved the number of passengers conveyed rarely fell below 45 per cent of capacity. In summary, it can be concluded that the first and second class carriages were run at well below capacity, whilst the third class was more substantially used. As Aldcroft aptly points out, however, "economical methods of handling traffic are crucial for improving railway operating efficiency."⁷⁴ But by the 1920's the Gold Coast Railways were clearly operating with excess capacity on the passenger side, most of this being explained by under-utilisation of first and second class carriages. The uneconomic operation of first and second coaching classes on the railways attracted managerial comment, first during the war years when rolling stock were in short supply,⁷⁵ but

more especially during the period of motor competition in the twenties.⁷⁶ The unification of these two classes was seriously considered. However, this suggestion was never implemented because of opposition from the white community who insisted upon segregation. As a result, second class carriages, which were aimed at the African elites, continued to be placed on the lines despite their obvious unprofitability.

Whilst coaching trains were thus uneconomically operated, the handling of goods traffic demonstrates an improvement in railway efficiency over time. (Table 9.5b). In 1914, the average number of tons in a loaded train amounted to 48 tons, but by 1928/29 the figure had more than doubled to 116.36 tons. The average carrying capacity of goods vehicles increased from 16.96 tons in 1915 to 22.48 tons in 1929/30 while the ratio of freight to carrying capacity rose from 30.88 per cent in 1916 to over 40 per cent throughout the twenties. Such improvements were largely a consequence of the reconstruction of the western line, which made possible the running of locomotives and rolling stock of heavier capacities. Furthermore, the punctuality of trains seemed to have improved considerably. For instance, in 1904 only 48 per cent of trains were running to schedule,⁷⁷ but by 1926/27 the figure had gone up to 83 per cent.⁷⁸ Hence travel time from Sekondi to Kumasi was practically halved from more than 20 hours in 1906 to 12 by 1927.⁷⁹

Any discussion of efficiency on the railways must also take into account the fact that the Gold Coast Railway was a single track system. This meant that a large amount of time was wasted in shunting and standing in steam to allow oncoming trains to pass in the opposite direction.

Table 9.5b

Goods Traffic: Average Carrying Capacity of Vehicles and ratio of Freight to Carrying Capacity.

Date	Carrying Capacity of Vehicles	Ratio of Freight to Carrying Capacity	Average No. of Tons in a Train
1915	16.96	38.59	43
1916	17.08	30.88	43
1917	na	na	na
1918	15.97	35.48	39
1919	na	na	na
1920	16.0	43.48	49
1921	17 .0	44.03	61
1922-23	19.0	44.18	67
1923-24	21.09	40.94	75
1924-25	21.73	43.0	84
1925-26	21.96	45.11	98
1926-27	21.86	44.18	105
1927-28	21.9	42.71	108.52
1928-29	21.84	41.06	116.36
1929-30	22.48	40.06	109.62

Source: General Manager, Railway Reports, 1915-1929-30.

This situation became even more acute on lines experiencing high accident rates. If one train was involved in an accident, it necessarily entailed delays for many more. But even so, the proportion of train mileage wasted in shunting and standing in steam to total train mileage also indicate an improvement in efficiency - from 28.97 per cent of total train mileage in 1907, to 18.97 per cent in 1928-29.⁸⁰

Clearly, except for coaching, where capacity remained underutilised in the 1st and 2nd classes, it is fair to say that the overall operating efficiency of the railways improved significantly over time.

Another important measure of the performance of railway enterprise is related to the growth of traffic and revenues. Table 9.6 presents figures for the annual rate of growth of gross earnings, goods

traffic, and foreign trade by volume in five year averages between 1905 and 1929/30. It would seem that a period of relatively

Table 9.6
**GROWTH OF TRAFFIC, REVENUES AND EXTERNAL TRADE,
1905-1930, (5 YEAR AVERAGES).**

Date	Annual Rate of Growth of Earnings (a)	Annual Rate of Growth of Gross Traffic (b)	Annual Rate of Growth of Goods Trade (c) by Volume
1905-1908	1.7	15.14	20.82
1909-1913	19.31	43.01	10.11
1914-1918	5.16	9.26	-1.42
1919-1923-4	18.46	14.29	10.22
1924-25-1929-30	2.69	8.02	15.7

Source: Columns (a) and (b) are calculated from revenue and traffic figures available in the General Manager's Annual Report on the Railways. Column (c) is calculated from data for Volume of foreign trade in Kay, Political Economy of Colonialism, Tables 20b and 21b.

rapid growth in railway earnings and traffic up to 1923/24 (checked only by the war years) gave way to a slower rate of growth by the mid twenties. Conversely, a relatively slow rate of growth in foreign trade between 1909 and 1924 had given way to a period of rapid growth during the second half of the 1920's. In other words the Railways initially grew at a faster rate than foreign trade but from the mid 1920's, the situation had reversed: foreign trade now experienced a faster growth than the Railways.

How does one account for such trends? Between 1904 and 1908 gross revenues fluctuated around a stationary state, as a result of tariff changes. The rapid growth in earnings and goods traffic from 1909 onwards indicates a growing demand for transport created by nearly a decade of railway operation in the Western Province. But the trend is also partly a consequence of the opening of the eastern line, in

1912 and its gradual extension to Tafo by 1917. During the war, revenues suffered a set back as a result of a contraction in railway capacity and the imposition of surcharges on tariffs. The rate of growth of goods traffic also slowed down. Such high rates, which remained in existence throughout the early twenties, together with the extension of the eastern system to Kumasi by 1923, accounts for the recovery in the rate of growth of revenues and, to a lesser extent, traffic during the post war years.

The evidence suggests that, while the growth of foreign trade was probably responsible for the growth in railway traffic and revenues before 1908, internal traffic, particularly low rated firewood was the main determining factor in the growth of railway revenue and traffic after 1908. Not surprisingly, the rate of growth of railway traffic generally exceeded that of revenues. During the War, while foreign trade recorded a negative growth in volume terms - an annual average of -1.42 per cent caused by shortage of shipping space - railway traffic experienced an annual growth of 9.26 per cent. However, a combination of high war time tariffs, increased transport demand, (especially in cocoa traffic), restricted railway capacity, and the preferential treatment of large consignees, who were often Europeans, had also resulted in a loss of railway traffic, mainly from African shippers, to the nascent motor transport. After the war, not only did the Railways fail to win back all of lost traffic, but more significantly, by the mid twenties it became evident that lorries had become major competitors to the railways. Consequently, the rate of growth of both railway revenues and goods traffic slowed down considerably at a time of rapid growth in foreign trade.

Another feature of the growth of revenues is the relative importance of goods traffic as opposed to coaching. (Table 9.7). In 1906, goods traffic receipts amounted to £139,915, and apart from one

Table 9.7

Railway Earnings

Date	Goods Receipts	Proportion of Goods Receipts to Gross Earnings	Coaching Receipts	Proportion of Coaching Receipts to Gross Earnings
1906	139,915	81.71	28,130	16.42
1907	128,257	77.14	31,989	19.24
1908	118,718	78.40	32,452	21.43
1909	146,824	79.19	35,886	19.35
1910	204,303	80.65	45,181	17.83
1911	220,113	76.98	61,872	21.64
1912	237,233	75.22	73,901	23.43
1913	263,874	73.18	90,445	25.08
1914	281,781	73.57	92,274	24.09
15	330,029	73.78	109,000	24.37
1916	359,974	73.47	121,199	24.74
1917	366,397	74.14	115,703	23.41
1918	327,195	71.66	114,317	25.04
1919	489,330	72.78	166,143	24.71
1920	520,458	70.59	197,652	26.81
1921	511,991	72.51	177,835	25.19
1922-23	655,015	74.61	187,744	21.39
1923-24	771,830	76.26	203,348	20.04
1924-25	826,315	77.47	202,079	18.94
1925-26	850,238	77.13	214,703	19.47
1926-27	894,220	77.32	224,031	19.37
1927-28	904,817	74.42	268,441	22.08
1928-29	917,508	73.82	281,729	22.67
1929-30	866,665	73.26	268,885	22.73

Source: General Manager, Railway Reports, 1906-1929/30

or two slight fluctuations, continued to grow steadily until it reached a figure of £917,508 in 1928-29. When these goods receipts were expressed as a percentage of gross earnings it is evident that they never accounted for less than three-quarters of gross revenues. It is therefore not surprising that tariff levels for goods traffic dominated

the debates over rating policy. The importance of goods receipts is a reflection of the Gold Coast's agricultural development, more especially the rise of cocoa farming. The agricultural traffic was employed to provide some degree of cross-subsidisation to the mining sector. This is illustrated by the principal goods traffic transported on the railways in 1926 and their relative contributions to gross goods receipts. (Table 9.8). These five commodities together constituted

Table 9.8

COMPOSITION OF GOODS TRAFFIC AND REVENUES 1926

Commodity	Tonnage Carried	Percentage of Gross Tonnage	Receipts	Percentage to Gross Goods Receipts	Average Rate Per Ton Mile
Manganese Ore	273,796	34.36	98,180	11.55	2d
Firewood (for mines)	110,307	13.84	11,860	1.39	2d
Coal (for lines)	9,079	1.14	4,992	0.59	1.7p
Cocoa	156,148	19.59	404,403	47.56	6.7p
Native Edible Food	11,577	1.45	11,963	1.41	3.25p

Source: Governor's Memo on Transportation to Honourable Ormsby-Gore, Visiting Parliamentary Under-Secretary of State, 3 March, 1926, C.O. 96/663.

more than 70 per cent of the total tonnage hauled by the railways and produced more than 60 per cent of the gross receipts. The figures show that although cocoa tonnage amounted to just over half of that of manganese, the former produced as much as 47.56% of the gross receipts as against 11.55% for manganese ore. Similarly, firewood for the mines which amounted to 13.84% of gross tonnage, produced a mere 1.39% of the total revenue. Admittedly, firewood and manganese ore were short haul loads, but even so it can be seen from the

average rates per ton mile that whereas cocoa attracted a high 6.7d per ton mile, and native foodstuffs 3.25d, manganese and firewood attracted a minimal rate of 2d, and even coal a mere 1.7d per ton mile. Not surprisingly, when Ormsby-Gore, the Parliamentary Under Secretary of State for the Colonies visited the Colony in 1926, he emphasised the important role cocoa played in the revenue of the railways. He stated that "Cocoa and cocoa alone enables the railway to pay its way."⁸¹ Consequently he was prepared to support administrative actions to protect the railway's cocoa traffic from road competition.

But perhaps nothing better illustrates the fact that it was Africans, more especially the traders and labouring classes, who bore the brunt of railway charges, than an analysis of coaching receipts (Table 9.9). It can be seen that between 1915 and 1928-29 (- other than

Table 9.9

Receipts per Vehicle Mile (Average Pence)

<u>Date</u>	<u>1st Class</u>	<u>2nd Class</u>	<u>3rd Class</u>	<u>Total</u>
1915	10.48	12.10	42.01	29.31
1916	10.43	12.34	41.09	na
1917	na	na	na	na
1918	8.12	9.35	40.42	25.98
1919	12.41	14.65	45.38	na
1920	16.75	29.28	55.12	41.9
1921	10.47	17.18	47.79	34.56
1922-23	17.58	11.26	32.94	26.96
1923-24	9.29	9.59	34.05	23.82
1924-25	9.18	6.61	34.72	21.92
1925-26	9.63	5.7	30.86	20.98
1926-27	9.44	4.84	32.82	22.26
1927-28	9.18	7.74	35.06	23.73
1928-29	9.99	6.73	33.84	18.28
1929-30	na	na	na	na

Source: General Manager, Railways Reports, 1915-1929-30.

the odd years 1920 and 1922-23) receipts per vehicle mile for first class traffic were generally low, at or below 10 pence. The position in second class coaching was even worse. From 12.1 pence per vehicle mile in 1915, receipts rose to nearly 30 pence in 1920 (largely as a result of the post war boom) but declined thereafter - to a mere 6.73 pence by 1928-29. On the other hand, 3rd class receipts per vehicle mile were already significantly higher in 1915 than those for 1st and second class. Although third class receipts followed the same general trends over time as first and second class receipts - rising from 42.01 pence in 1915 to 55.12 pence in 1920, and declining thereafter - they never dropped below a level of 30 pence per vehicle mile. Clearly, the African traders and workers who were the principal passengers in third class were cross-subsidizing the more privileged groups travelling by first and second class. To measure the performance of the railways merely by total revenues would be to miss the extent to which certain categories of customers contributed more to the growth of revenues than others.

If railway revenues were consistently rising (faster in some periods than in others), were the Gold Coast Railways profitable? Because of the way the Colonial Government presented its accounting, the true profitability of the railways was usually misrepresented. Net profits were simply expressed as the difference between gross receipts and working expenses. Such "profits" however, totally ignore the interest payments made by the Colonial Treasury out of general revenue on railway and harbour loans. Once these payments are taken into account, (Table 9.10), it would appear that the profitability of the railways was far less impressive than both the railway accounts and commentators

Table 9.10
ANNUAL NET RATE OF RETURN ON CAPITAL OUTLAY, 1904-1930

Date	Gross Earnings	Working Expenses	Proportion of Working Expenses to Gross Earnings	Capital outlay in Railway and Harbours	Interest charges on Capital	Proportion of Interest Charges to Gross Earnings	Net Profit/Loss	Net Rate of Return on Capital Outlay
1904	148,096	91,465	61.76	1,098,000	32,940	22.24	23,691	2.16
1905	132,752	82,477	62.13	1,098,000	32,940	24.81	17,335	1.58
6	171,231	77,257	45.11	1,098,000	32,940	19.24	60,835	5.54
7	166,257	76,776	46.18	1,098,000	32,940	19.81	56,541	5.15
8	151,423	75,124	49.61	1,098,000	32,940	21.75	43,359	3.95
9	185,410	73,914	39.86	2,128,000	68,990	37.21	42,506	2
10	253,329	84,800	33.47	2,128,000	68,990	27.23	99,539	4.68
11	285,917	102,119	35.71	2,128,000	68,990	24.12	114,308	5.4
12	315,292	120,967	38.36	2,128,000	68,990	21.88	125,415	5.89
13	360,591	149,955	41.59	2,128,000	68,990	19.13	141,649	6.66
14	383,009	174,093	45.45	3,163,000	110,390	28.32	98,524	3.11
15	447,294	183,807	41.09	3,163,000	110,390	24.68	153,098	4.84
16	489,912	197,065	40.22	3,153,000	110,390	22.53	182,457	5.77
17	494,185	195,474	39.56	3,163,000	110,390	22.34	188,316	5.95
18	456,574	197,513	43.36	3,163,000	110,390	24.28	148,666	4.7
19	672,311	234,230	34.84	3,163,000	110,390	16.42	327,691	10.36
20	737,262	365,309	49.55	7,163,000	350,390	47.53	21,563	.3
21	706,107	455,249	64.47	7,163,000	350,390	49.62	-99,532	-1.39
22-3	877,393	398,340	45.37	7,163,000	350,340	39.91	129,163	1.8
23-4	1,012,081	528,330	52.22	7,163,000	350,390	34.62	133,161	1.86
24-5	1,066,560	551,733	51.73	7,163,000	350,390	32.85	164,437	2.3
25-6	1,102,301	588,012	51.53	11,791,000	558,650	50.68	-24,361	-0.21
26-7	1,156,453	572,882	49.54	11,791,000	558,650	48.31	24,921	0.21
27-8	1,215,320	603,089	49.6	11,791,000	558,650	45.95	54,081	0.46
28-9	1,242,947	598,381	48.14	11,791,000	558,650	44.95	85,917	0.73
29-30	1,183,035	643,712	54.41	11,791,000	558,650	47.22	19,327	0.16

Source: General Manager, Railways Reports, 1904-1929-30; Colonial Treasury, Treasury Reports, 1904-1929-30.

on them⁸² would want us to believe. The railways were initially fairly profitable. As the figures for the net rate of return on capital outlay indicate, there seemed to be a fluctuating but steady growth throughout the first two decades, - (net rate of return reaching a peak of 10.3 per cent in 1919). However, the position drastically deteriorated throughout the 1920's. Not only did the railways make losses in the years 1921 and 1925/26, but in the years in which there were profits, the net rate of return rarely exceeded 1 per cent. Clearly, by the twenties, the railways had ceased to be, in McPhee's words, "the milch-cow of a penurious Treasury."⁸³ On the contrary, by this time, railway revenues were almost evenly divided between maintenance costs and interest payments on loans to the British creditors, leaving a very small profit margin for the Colony. Indeed if one were to include on the debit side of the balance sheet the pension charges for Railway staff, such gains would become losses - by 1930, pension charges amounted to 2.04 per cent of the gross earnings.⁸⁴

How does one account for the diminishing returns of the twenties? First, operational expenses were much higher during the 1920's because of the need to repair deficiencies caused by war time dislocations in the railway system. As the General Manager pointed out in 1917:

The improved percentage of expenditure to working receipts was not altogether due to more economical working, but to the fact that certain necessary stores and materials which the railways are badly in need of, were practically unprocurable ... Upon the cessation of hostilities there must be a heavy increase in expenditure to enable the railway to be put into a proper state of efficiency.⁸⁵

And a heavy expenditure there was. The operational ratio drastically deteriorated from 45.55 per cent in 1920 to 64.47 per cent in the

following year. Although the situation improved thereafter, the operational ratio settled at around 50 per cent, as compared with around 40 per cent in the years before the war. The improved efficiency in carrying capacity seems to have been accompanied by higher working expenses.

Secondly, the huge rise in interest payments from 1920 is to be explained only partly by post war inflation, during which time borrowing rates escalated to 6 per cent. By 1925, interest rates had fallen back to their pre-war levels of 4 per cent. Much more important than the rise in interest payments during the 1920's was the substantial new borrowings undertaken as a consequence of the Guggisberg development programme. Capital investment in railways and harbours rose by nearly three hundred per cent - from £3,163,000 in 1919 to £11,791,000 in 1925-26. Such outlays could not have been expected to have provided much in the way of enhanced revenue before the completion of the Central line and Takoradi harbour, in 1927 and 1928 respectively. In the meantime, the existing lines had to bear the interest charges on the new construction. However, any hopes for enhanced revenues and profits were dashed by the continuing motor competition and by the onset of the Depression of the 1930's.

Despite growth of operational efficiency and rising revenues, the railways were operating at low levels of profitability during the 1920's. Whether this could be taken as evidence that the era of railway-building in West Africa was drawing to a close (as some critics of the Guggisberg programme imply), or whether the Guggisberg strategy was essentially sound, and likely to have been successful, is still open to debate.

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P A R T I I I

CHAPTER 10

THE ECONOMIC AND SOCIAL IMPACT OF THE RAILWAYS

Traditionally, railways have been considered to be dynamic forces in economic development. Whilst Max Weber called them "the greatest innovation in history,"¹ Joseph Schumpeter argued that American economic history in the second half of the nineteenth century could be treated solely in terms of railway construction and its effects.² Writing earlier, in the 1850's Karl Marx had predicted that the construction of railways in India would automatically result in industrialisation:

You cannot maintain a net of railways over an immense country without introducing all those industrial processes necessary to meet the immediate and current wants of railway locomotion, and out of which there must grow an application of machinery to those branches of industry not immediately connected with railways. The railway system will therefore become, in India, truly the forerunner of modern industry.³

For nearly a century, such ideas held great sway, especially as the construction of railways in most parts of Europe and North America had been followed by rapid industrialisation. Thus, to Rostow, the railways were the "leading sector" in the French, German, American and Russian industrial "take offs."⁴

Confronted with a historiography that made large claims for the impact of railways on economic development, economic historians in the 1960's began to quantify the precise contributions that the railways had made. By the application of modern econometric techniques, scholars were able to pose counterfactual questions: they measured

the differences in levels of national output between the actual economies of America, Britain and Russia with railways, and hypothetical alternatives without railways.⁵ They were then able to produce figures which indicated the "social saving" which accrued to a particular economy through the construction and operation of its railways. Their results have challenged the traditional view that railways provide sufficiently strong backward linkages to transform the entire economy. Thus, in Britain for instance, it is argued that the railways did not effect any structural shifts in the patterns of economic activity.⁶

There is no doubt that the "social saving" concept represented a major break through because of its attempt to quantify the exact contribution a major innovation makes to economic development. However, apart from methodological and conceptual weaknesses inherent in this approach,⁷ there are other reasons why the social saving method cannot be applied to the Gold Coast Railways. First, there are no reliable data concerning the national income of the country during the period under review.⁸ Second, in the Gold Coast, until the development of motor traffic from the 1920's there were no real alternatives to the railways apart from traditional head portage. As Colin White has observed about Russia, in a relatively backward economy which is poorly served by its natural transport infrastructure, the concept of social saving has failed "to gather into its net a whole series of significant benefits brought by the railways."⁹ Furthermore, in tropical Africa, it must be noted that railway communications were planned and executed from Europe to serve specific imperial economic objectives. Consequently any discussion of the impact of the railways must consider the "nature" or

"implications" of the type of Colonial economy created by the introduction of the railway system, rather than on "social saving" that accrued to the country as a whole. For instance, to what extent was the growth of railway traffic a reflection of the development of the mining sector vs agriculture, on the one hand, and external or internal trade on the other. Finally, the social saving method tends to concentrate exclusively on "economic gains." As far as Colonial Africa is concerned however, the social and political effects of the railways still awaits a thorough study. Thus, to concentrate solely on the social savings that accrued to the economy is to ignore other less tangible, but far reaching consequences of the railways.

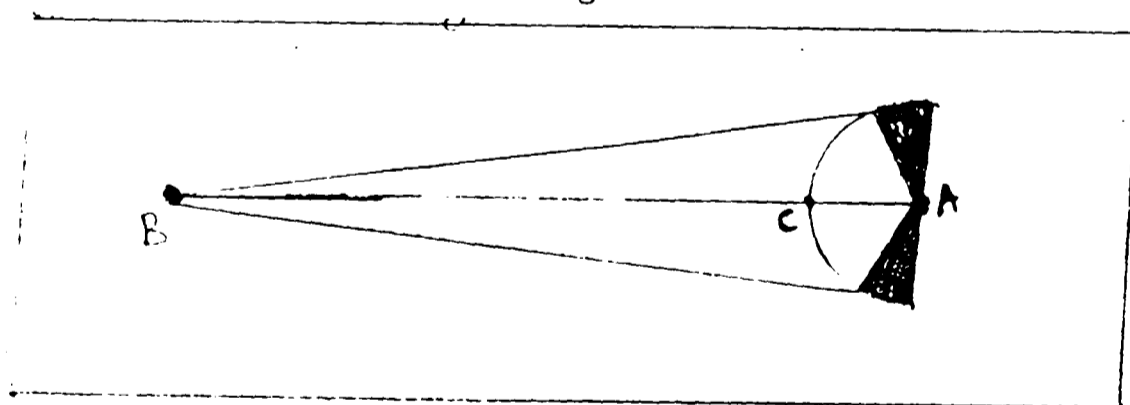
Consequently, although this work will adopt the new economic history approach by examining the role of the railways in terms of both backward (i.e. consumption of inputs) and forward (i.e. as a transport agency) linkages, it will not attempt a measure of social savings. On the other hand, an attempt will be made to evaluate the impact of the railways on output and employment in commerce and traditional crafts, as well as the effects on urbanisation and public health.

THE SCALE OF RAILWAY INNOVATION

There are two important factors that normally affect the impact that a railway has on an economy. First, the extent to which it lowers transportation costs, and second the geographical spread and/or size of the network itself. The longer the mileage, the stronger the forward and backward linkages established and the wider the spatial distribution of lowered transportation costs. However, the advantages of

lowered transport costs would be limited by the fact that the system was not only small in mileage, but also confined to the southern half of the country. From an average of 1 route mile per 584 sq. miles in 1904, the Gold Coast rail density rose to 1 route mile per 184 sq. miles in 1929/30.¹⁰ Assuming, as the General Manager argued that the sphere of the economic activity covered a distance of 20 miles on either side of the railway tracks,¹¹ then by 1930 just over 20 per cent of the Gold Coast's land surface (i.e. including Ashanti and the Northern Territories) could be said to have fallen under the direct influence of the railways. However, even this estimate would appear to be an exaggeration of the spatial influence of the railways. As Fishlow's study of the effects of transport investment has shown, the sphere of the economic activity narrows directly in proportion to the distance from the coastal terminal:

Figure 1



The construction of the railroad, by reducing transport costs, immediately widens the area of profitable cultivation, as shown. Along the margins of the triangle, and at B itself, the sum of the lower transport costs and constant production costs equals the former revenue Rents will rise in this new zone, reflecting the new lower supply costs and profits potentially earned on land brought closer to the market.¹²

If this is so, it is fair to conclude that the proportion of the Gold Coast's total land surface which came under the direct influence of the railways was exceedingly low indeed - perhaps as low as 10 per cent. The smallness of the size of the network and its limited geographical spread would affect both the nature of the railway's demand for inputs and the spatial distribution of lowered transport costs.

BACKWARD LINKAGES: A STIMULUS FOR THE GOLD COAST ECONOMY OR MARKETS FOR THE METROPOLITAN INDUSTRIES?

Did railways in the Gold Coast make any significant demands for inputs from the indigenous economy during the three decades preceding 1930? Table 10.1 indicates the value of materials and equipment purchased by the Gold Coast Railways Department for construction and maintenance between 1906 and 1929/30 (i.e. excluding the construction of the Western line 1895-1905). It can be observed that out of a total of £6,225,043 worth of stores purchased, only £271,211 - or about 4 per cent, was spent on materials obtained locally in the Colony; £459,487 - amounting to 7 per cent, was the cost of coal imports from Nigeria, while the remaining, £5,494,345 - or 88 per cent, was the cost of materials purchased directly in the United Kingdom. In fact, given that the "local" purchases included such imported items as cement, iron sheets, nails and even to some extent sawn timber, which were obtained locally, then the proportion of railway inputs which were supplied directly by the indigenous economy was very small indeed.

Wood for fuel was the main item of railway consumption that could be regarded as a product of the Gold Coast economy. Initially, the railways relied exclusively on imported coal from Britain but by 1904

they had started burning firewood as well. Wood fuel was much bulkier and less efficient than coal, but it was cheaper. Firewood cost 10 pence per train mile as against 40 pence for coal.¹³ Although imported coal was always used, especially on the eastern line where suitable firewood (the kakur tree) was less readily available, the evidence suggests that wood accounted for the greater proportion of the overall fuel consumption of the railways. By 1919 the railways were burning 14,000 tons of firewood annually as against 2,000 tons of coal.¹⁴ The demand for wood fuel by the railways, but to an even greater extent the mines, posed serious environmental problems. Consequently, although the locomotives continued to burn wood, there was a move towards a greater reliance on imported coal from Nigeria from 1920 onwards.¹⁵

Although the Gold Coast was endowed with rich timber resources, no attempt was made to establish a railway saw mill for processing timber for construction purposes. Instead, sawn timber was either imported directly from Britain, or purchased locally from merchants who had imported it in the first place. Thus, it was not until the difficulties of war time import restrictions were experienced that the idea of establishing a Railway timber processing mill was broached.¹⁶ Nothing immediately came of the proposal. Not only was the Railways Department deprived of funds at that time, but necessary tools and machinery, such as saw mills, were virtually unprocurable. Consequently, it was not until in 1922 that machinery for timber processing was installed in the Railways Workshop at Sekondi¹⁷ - by which time the construction of most of the network had been completed. On the other hand the Railway Department did develop its own granite quarries from the

very start of its operations, - one at Sekondi and another at Weiija near Accra, which provided ballast and boulders for track construction and maintenance, as well as for harbour works.¹⁸

Clearly, other than wood fuel and ballast materials, and to a lesser extent timber, the Railways drew little of their needs for materials and equipment from the Gold Coast economy.

Virtually all the requirements of the railway system - the skills, locomotives, permanent way materials, coaches, workshop machinery and tools, and to a lesser extent fuel and timber - were imported wholesale from the United Kingdom. The expenditure on such items - £5½ million excluding the construction of the Western system - constituted a substantial expenditure by the Colony in the metropolitan country. Thus, the direct benefits of railway construction and operation (i.e. demand for inputs) did not accrue principally to the Gold Coast economy. Instead, they accrued to the well-established metal and engineering industries of the metropolis. It is thus evident that in the Gold Coast, the demand for railway inputs did not lead to the establishment of "those branches of industry not immediately connected with the railways."¹⁹ The railways failed to establish any significant backward linkages with the indigenous economy.

Part of the problem was that prior to the construction of the railways, there were not industries in the Gold Coast capable of meeting the railway's demand for materials. Moreover, there were no coal deposits, and iron ore and manganese were not discovered until during the war. Furthermore, the size of the rail network itself -

500 miles - was too small to warrant the establishment of heavy metal industries.

Nevertheless, it is equally true to say that the railways were intended to serve specific imperial economic objectives as much as they were intended to stimulate the Gold Coast economy. The economic self interest of the metropolitan country ensured that the Gold Coast Railways would only buy British goods. In 1893 when Chamberlain sought to publicise the West African railway proposals, he assured the British Parliament that the construction of such railways would stimulate British industry and provide jobs for the unemployed because, "all the work will be done in this country."²⁰ Indeed, once construction was authorised two years later, and the Crown Agents charged with the purchasing of materials, the Colonial Office explicitly stipulated that orders were not to be placed outside United Kingdom sources.²¹ To this official policy of safeguarding the interests of the metropolitan industries must be added the self interests of the Crown Agents themselves. As builders of Crown Colony projects, the Office of the Agents expanded rapidly in the wake of the construction of the West African railways. In 1900, the Office conducted about £9½ million business for the Colonies, five years later the figure had nearly trebled to £26 million, and the staff grew from 33 in 1881 to 200 in 1908.²² This increased responsibility, Dumett argued, endowed the Crown Agents "with a vested interest and a generating force of their own."²³ Consequently, neither the Crown Agents nor the Colonial Office were willing to encourage the establishment of local industries that were capable of providing substitutes for imported materials. For instance, the railways demands

Table 10.1

Value of Materials and Equipment Purchased for Railway and Harbour
Construction and Maintenance, 1906-1929/30

Year	Total Stores	Local Purchases	Udi Coal	U.K. Purchases	U.K. Purchases as Percentage of Total Stores
1906	£ 46,902	£ 10,040	£ -	£ 36,862	79
1907	26,798	7,134	-	19,664	73
1908	17,593	8,210	-	9,383	53
1909	27,901	9,088	-	18,813	67
1910	27,366	7,557	-	19,807	72
1911	60,213	10,029	-	50,184	83
1912	74,270	17,732	-	56,539	76
1913	141,889	26,568	-	115,321	81
1914	na	na	-	na	na
1915	187,417	6,079	-	181,338	97
1916	128,240	12,562	-	115,678	90
1917	na	na	-	na	na
1918	73,032	6,464	-	66,568	91
1919	211,417	9,081	-	202,336	96
1920	933,786	19,558	-	914,228	98
1921-22	1,742,276	31,323	-	1,710,953	98
1922-23	677,665	16,556	-	661,109	98
1923-24	271,665	10,596	11,883	249,206	92
1924-25	334,950	13,445	57,576	263,929	79
1925-26	310,133	8,825	63,120	238,188	77
1926-27	148,096	6,802	65,035	76,259	51
1927-28	257,740	9,795	75,590	174,355	68
1928-29	271,226	11,086	81,397	178,743	66
1929-30	254,229	12,702	106,886	134,641	53
Total	6,225,043	271,211	459,487	5,494,345	88

Source: Gold Coast Blue Books, 1906-1929/30.

for bricks, drainage pipes and tiles, was one area in which opportunities existed within the Colony, and by 1913 the Department had started manufacturing its own bricks. The official response from London, however, was hostile. The railway management was instructed to discontinue the projects, ostensibly because it "hardly comes within the scope of a Railways Department,"²⁴ but in reality because bricks and

tiles were readily available for import from Britain. Similarly, during the War, when railway materials were unavailable in the U.K. and the local administration proposed to make purchases from the United States the Colonial Office objected because such a course would be "prejudicial to (foreign) exchange."²⁵ In fact, some of the constructional problems encountered by Stewart and McDonnell in the construction of Takoradi, more especially as regards the procurement of materials, were located within this conflict of interest, between the metropolitan country on the one hand, and the local economy on the other (See Chapter 4).

The pattern of expenditure on railway materials and equipment was reproduced in that of manpower. Just as the direct benefits of railway demands for material inputs accrued to the British economy, so the lion's share of railway construction and operation wage income was spent on European imported goods. As we have observed, not only were the managerial and supervisory positions filled exclusively by Europeans, but more importantly, the cost of maintaining them was generally high - by 1920 the salaries of such workers, who constituted only 3.75 per cent of the work force, took 44.33 per cent of the total wage bill. Thus, the largest part of the wage bill went to Europeans, who had a propensity to buy imported consumer goods and foodstuffs. Even the modest per capita incomes of African railway workers failed to generate a substantial demand for local goods and services. This was partly because the majority of construction workers received part of their wages in kind, mainly imported rice and tinned fish. Moreover, a significant portion of workers' money wages was also expended on imported goods. As the Consulting Engineers report stated

in 1904: "expenditure in the Colony consists principally of wages paid to labourers, who spend the majority of it through the merchants on the coast upon the purchase of European goods."²⁶ Finally a proportion of the African wage income was also lost to the Colony through repatriation of savings by immigrant labourers who had been recruited from Nigeria and Sierra Leone.

Clearly, wages and salaries from railway construction and operation did not provide any significant multiplier effect on the indigenous Gold Coast economy. Thus, contrary to Chief Commissioner Watherston's promises to Northern Territories Chiefs in 1907, cash earnings by Northern labour on the railways and mines in the south did not lead to the establishment of "large scale commercial agriculture in the North."²⁷ Instead, like expenditure on materials, the benefits of railway wage labour accrued mainly to the established consumer industries of the United Kingdom.

FORWARD LINKAGES: PRODUCTION FOR DOMESTIC NEEDS OR EXTRACTION OF RAW MATERIALS FOR METROPOLITAN INDUSTRIES?

Although the Gold Coast economy was little influenced by backward linkages from the railways, the provision of transport facilities by contrast, strongly affected economic activity. Once in operation, the railways offered substantial advantages over traditional human portage. As well as being more readily available, faster, and more reliable, railways provided significant reductions in transport costs. Table 10.2 shows comparative transport costs in the Gold Coast in 1903 and 1922/3. It becomes evident that railway charges in 1903 not only represented substantial reductions over that of headportage, but transportation

Table 10.2

Comparative Transport Costs, 1903 and 1922-23

Type	Per Ton Mile
Railways (1903)	1s - 2/6d
Headloading (1903)	15s - 24/-
Railways (1922)	3d - 7½d
Lorry Traffic (1922)	2s 9d
Headloading (1922)	5s - 6s

Sources: Colonial Office to London Chamber of Commerce, November 6 1903, P.R.O: C 96/42; Governor's Annual Address, Legislative Council Debates, 1923-24. P 78.

costs in general were reduced over time.

By reducing transport costs the railways effected significant savings in the economy. For instance, labour that would have been used to transport goods was liberated for use in other economic activities. Although the extent of such savings is difficult to assess, Lugard's estimate that a railway train of average capacity will do the work of 13,000 carriers at one-twentieth the cost²⁸ gives some idea of the superiority of railways over head porterage.

As to the role and impact of the railways in the economy however, opinion is strongly divided. On the one hand Allan McPhee, following the imperial tradition, stressed the "diffusionist" role of the railways: "the railways open up trade wherever they go", and "the expansion of the Gold Coast cocoa industry is simply the other side of the railways expansion."²⁹ To McPhee then, the railways were indispensable to the Gold Coast's economic development. On the other hand, Rhoda Howard, writing in the dependency tradition, argued that the railways provided far too few opportunities for internal trade, and merely acted as

funnels to drain the country's raw materials to Europe in return for manufactured trade goods.³⁰ Like McPhee, Howard takes for granted the importance of the railways in the expansion of external trade, although she was pessimistic about the possibility of development following from export-led growth. However, Geoffrey Kay's argument that transportation policy favoured expatriate capital, as opposed to indigenous capital, introduces a further dimension to the discussion. Central to Kay's argument is his assertion that the railways were unimportant in the expansion of the cocoa industry, because neither the Eastern nor the Central line (both of which the administration claimed were designed to serve the industry) effectively "traversed" the cocoa-belt. Instead, apart from the lower stretches of the Eastern line, all the principal lines were laid through the fringes of the cocoa growing areas.³¹ As far as Kay is concerned therefore, the main beneficiary of railway communication was the expatriate mining sector - the railways failed to serve (indigenous) cocoa production. Three views thus emerge about the effects of the railways:-

1. McPhee - the railways stimulated both internal and external trade, but the cocoa industry in particular;
2. Howard - the railways had little impact on internal trade, and were largely instrumental in promoting import-export trades; and
3. Kay - the railways primarily served the expatriate mining sector.

The problem however is that like views on selection of routes (see Chapters 2-4), the empirical evidence upon which these conclusions are based is tenuous, mainly because such scholars were not so immediately concerned with the effects of the railways as they were with Colonial policy in general.

Gould's study of transportation patterns in Ghana by contrast, provides a much clearer picture of the effects of the railways. His claim that the railways promoted import-export trades mostly, but to a lesser extent internal trade, was backed up by a detailed analysis of traffic circulation. For instance, he showed the relative importance of the principal lines to the mines on the one hand, and cocoa farming on the other. Thus, the western system had the greatest flow in the "Up" direction (98 per cent of total traffic in 1904) while the eastern line depended upon a heavy export movement to Accra (70 per cent when first opened in 1912), reflecting the early importance of imported mining inputs on the former and cocoa exports on the latter.³² While this work contains much information on the Gold Coast transportation system, its relevance for our present purpose is limited by the fact that as a Geographer, Gould's main concern was to measure the spatial movement of traffic.

This section seeks to examine in greater detail the nature of the forward linkages provided by the railways. In view of the differing conclusions outlined above, the analysis will focus on the question: to what extent was the growth of railway traffic a reflection of the development of external vs internal trade on the one hand, and mining vs agriculture on the other? In addition, the question will be asked whether the timing of railway innovation was of any significance to the emergence of the Gold Coast cocoa industry.

An examination of railway goods traffic provides one means of evaluating the effects of the railways. Table 10.2 identifies the three broad categories of goods traffic carried on the railways between 1905

Table 10.3

Internal/External Trade Goods Carried on the Gold Coast Railways, 1905-1929/30. (000's of Tons, Excluding Livestock)

Date	Gross Traffic	Internal Traffic	% of Internal to Gross	Imported Traffic	% of Imported to Gross	Exported Traffic	% of Exports to Gross	Total % of Imports and Exports to Gross
04	na	na	na	na	na	na	na	na
05	32.2	.4	1	24.8	77	7.0	22	99
06	47.4	.6	1	41.1	87	5.7	12	99
07	51.1	.6	1	37.8	74	12.6	25	99
08	46.2	4.8	10	32.4	70	9.0	19	90
09	55.5	5.7	10	46.6	84	3.4	6	90
10	82.4	6.3	8	72.1	88	4.0	5	92
11	182.2	89.6	49	85.0	47	7.6	4	51
12	197.4	83.2	42	89.3	45	24.9	13	58
13	231.0	74.9	32	108.8	47	47.3	20	68
14	258.6	91.5	35	118.2	46	48.9	19	65
15	269.2	115.7	43	92.1	34	61.4	23	57
16	297.8	134.8	45	99.9	34	63.1	21	55
17	335.1	151.9	45	69.7	21	113.5	34	55
18	316.4	169.7	54	45.9	14	100.8	32	46
19	347.9	143.9	41	54.7	16	149.3	43	59
20	371.4	145.0	39	81.2	22	145.2	39	61
21	359.6	155.9	43	77.9	23	123.8	34	57
22-23	439.1	131.2	30	72.6	16	235.3	54	70
23-24	595.7	110.8	19	120.2	20	364.7	61	81
24-25	702.6	123.7	18	136.4	19	442.5	63	82
25-26	796.9	118.1	15	144.3	18	534.5	67	85
16-27	805.2	120.7	14	131.7	19	552.8	67	86
27-28	789.8	128.6	16	141.0	18	520.3	66	84
28-29	818.8	120.7	15	145.9	19	542.2	66	85
29-30	932.2	135.8	15	139.3	15	657.1	70	85

Source: General Manager, Railways Reports, 1905-1929

and 1929/30. Internal traffic was comprised of firewood, local foodstuffs, fish, and sawn timber. Import traffic comprised coal, machinery, building materials, food staples, spirits, cotton goods, salt etc. Export traffic was comprised of cocoa, timber, manganese ore and small quantities of rubber, palm produce and kola.

Looking first at internal traffic, it can be seen that movements of total tonnage fall into three distinct periods. Between 1905 and 1910, such internal traffic was conspicuously absent from the railway system, amounting to a mere 6,000 tons per annum on average. Thereafter, the position improved dramatically - internal traffic rose from 89,600 in 1911 to 169,700 tons in 1918 - but this short period of growth was followed by a significant decline throughout the 1920's. Thus apart from the years between 1911 and the early 1920's, the proportion of internal traffic carried on the railways, was generally low, amounting to no more than an annual average of 15 per cent of the gross goods traffic. Conversely, the proportion of external trade (i.e. imports and exports) carried on the railways, was always very high. From over 90 per cent between 1905 and 1910, the proportion declined between 1911 and 1920, but rose again throughout the 1920's to between 70 and 86 per cent. The strength of external traffic rested upon the role of exports. Although the tonnage of imports transported on the railways grew in quantity, it declined drastically as a proportion of the gross railway traffic over the three decades before 1929/30 - from 87 per cent in 1906 to 15 per cent in 1929/30. This was mainly the result of the appearance of a large export traffic, especially in cocoa and manganese ore during the War. Thus the decline in the proportion of imports was offset by the rise in the tonnage and percentage of export

traffic - up from 4 per cent in 1911 to no less than 70 per cent in 1929/30.

Clearly, other than during the decade 1911 to 1921, when the proportion of internal traffic accounted for an annual average of about 40 per cent of the gross goods tonnage, railway traffic generally reflected a strong bias towards external trade, and particularly towards export commodities.

To what extent were the changes in the composition of the railway traffic a reflection of the expansion of agriculture on the one hand, and the extraction of forestry and mineral resources on the other? Railway traffic was influenced to a considerable extent by the growth of the mining sector - gold, manganese and diamonds. In terms of import traffic (Table 10.4) a substantial proportion initially consisted of machinery, coal, and building materials which were hauled to the mining districts of Tarkwa and Obuasi. During the three decades before 1929/30, coal remained the most important traffic by weight, though its tonnage, like that of machinery, declined in the long run. From 4,800 tons in 1904, coal traffic expanded steadily to 42,000 tons by 1914 or 17 per cent of the gross railway traffic. Mining machinery increased from 1,968 tons in 1904 to 9,050 tons in 1912, while building materials rather halved from 4,300 tons in 1904 to 2,747 tons in 1907. Thereafter, the volume of import traffic carried to the mining companies declined considerably. Thus, coal traffic fell from over 40,000 in 1914 to 2,514 tons in 1918 while that of machinery from over 9,000 tons in 1912 to 2,459 tons in 1918. The decline in building materials, coal and machinery traffic is to be explained only partly by the war time import restrictions. Much more important was the fact that by 1912

Table 10. +

Principal Commodities carried on the Gold Coast Railways in Selected Years

Commodities	TONNAGE					
	1904	1907	1912	1918	1923/4	1929/30
Building Materials (Mines)	4,300	2,747	na	na	na	na
Machinery (Mines)	1,968	4,475	9,015	2,459	1,224	689
Coal (Mines)	4,800	13,793	28,834	2,514	13,070	13,033
Firewood (Mines)	na	na	71,995	139,693	97,326	122,618
Imported Food Staples	1,392	2,084	9,215	2,085	11,266	15,011
Gin & Spirits	498	141	2,972	1,351	2,593	2,685
Native Foodstuffs	1,047	4,476	11,167	26,728	11,426	868
Exported Timber	-	11,957	4,105	9,883	10,768	10,523
Cocoa	50	557	20,752	73,254	164,329	139,462

Source: General Manager, Railways Reports, Selected Years.

most of the gold mines had "completed the erection of plant and machinery, introduced cost saving techniques, and have extended their own firewood tramways."³³ Thus, although coal traffic recovered somewhat during the 1920's, it now represented only around a half of the pre-war tonnage.

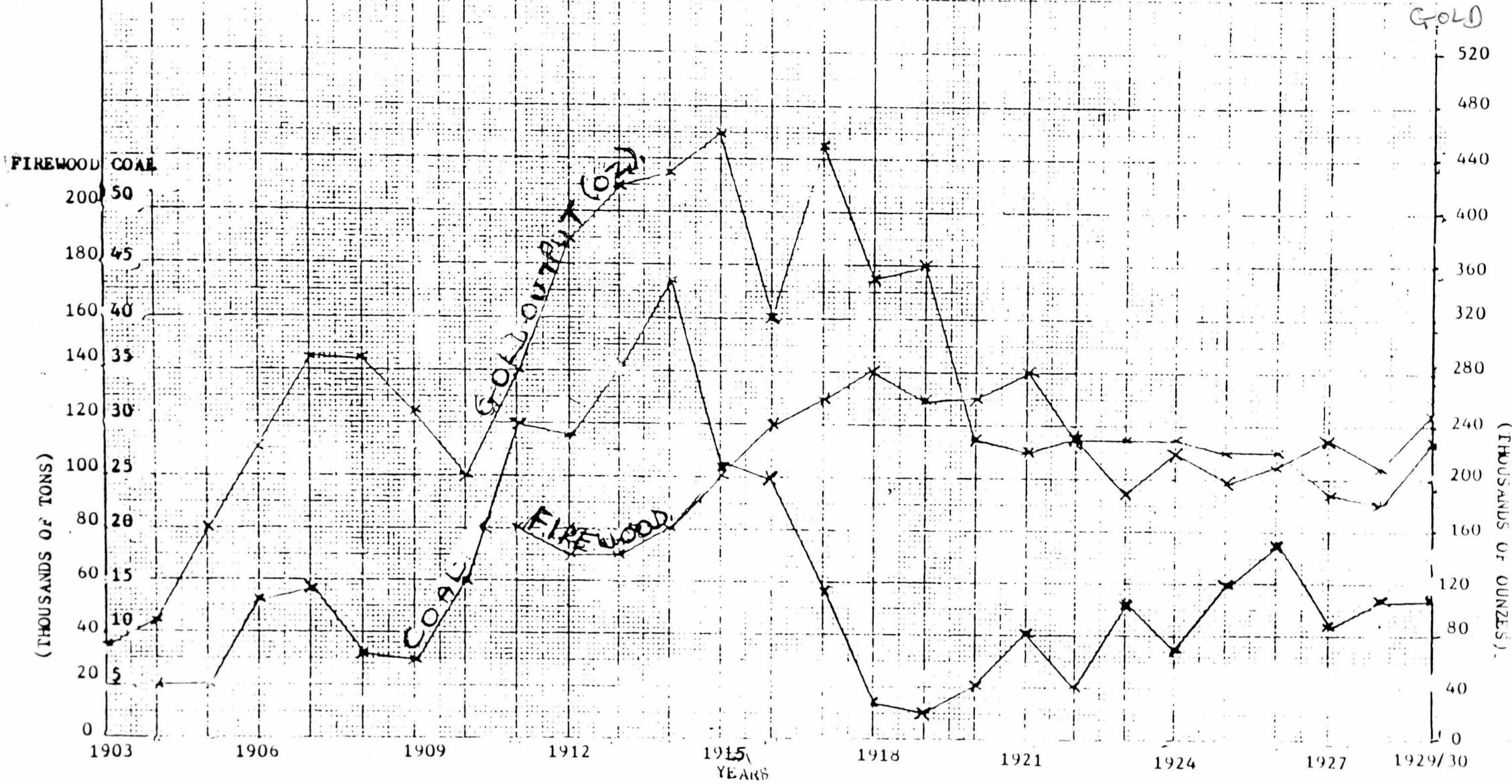
Not surprisingly, the decline in coal traffic was accompanied by a dramatic rise in firewood railed to the mines. Wood fuel was the most important element in internal trade. Like the railways, the mining companies started burning wood from 1904 when they reckoned that it cost less than half the price of coal. Although the General Manager of the Railways was worried that, "fine timber is being cut for firewood by the mines, and the railways and shipping companies lose freight,"³⁴ firewood traffic grew rapidly, to a tonnage of 81,364 or 47 per cent of the gross railway goods tonnage by 1911. This figure dropped over

the next two years to 66,433 tons in 1913 (partly because the majority of the mines had depleted the firewood stock in their immediate vicinity and had started to burn more coal) but it rose again to record levels throughout the war years when imported coal became scarce. Thus, by 1918, 139,693 tons of firewood was carried to the mines, regaining its share in the total tonnage from 29 per cent in 1913 to 44 per cent. The increased demand for wood fuel was reflected in higher producer prices though this varied considerably from one place to another. At Akrokeri near Obuasi, the price of soft wood (12½ cords of 144 feet) rose from 3s in 1914 to 5s6d in 1919 while at Tarkwa a similar quantity of hard varieties cost 12s6d in 1919.³⁵ The increased firewood business was also accompanied by movement of population settlements as the war years saw the establishment of firewood camps along the western line: nomadic in 1916 they had become permanent in 1917.³⁶ Although official policy after the war favoured the substitution of imported coal for local firewood because of the dangers of rapid deforestation, nevertheless, wood continued to account for the greater proportion of the overall fuel consumption of the mines. As late as 1929/30, 122,618 tons of wood fuel traffic, amounting to 13 per cent of the gross goods tonnage was railed to the mines as against 13,033 tons or 1 per cent for coal.

Perhaps the most powerful evidence of the impact of the railways upon the mining industry, was the close correlation between fluctuations in the level of fuel traffic (coal and firewood) carried on the railways, and fluctuations in gold output. (Graph 1). Thus, from a mere 6,000 oz. in 1901, gold output rose steadily (as did fuel traffic) to record levels during the war years - but this period of

GRAPH I
GOLD OUTPUT AND RAILWAY TRAFFIC IN COAL AND FIREWOOD, 1903-1929/30

Source:- General Manager, Railways Report, 1903-1929/30



growth was followed by a significant decline during the 1920's. Such a close correlation between fuel traffic and gold output illustrates the observation that "bullion and firewood were more closely related than their names would suggest."³⁷ In fact, almost, the entire wood fuel traffic of the railways was used by the gold mines, whose location in the heart of the tropical forest made it more economical for them to burn wood. On the other hand, the manganese mines which were situated only 25 miles from Sekondi harbour found it cheaper to make use of imported coal. Although diamond mining occurred at Kade, 150 miles from the Sekondi port, it still proved more convenient to import coal because the spread of cocoa farming had depleted firewood stocks over most parts of Akyem Abuakwa. Thus, much of the coal traffic after the war went to the manganese and diamond mines whilst the gold mines depended largely on firewood.

Apart from transporting fuel and stores to the mines in general, the development of manganese mining in particular generated a large export traffic for the railways, more so at a time of growing motor traffic competition for the conveyance of cocoa. Manganese traffic first appeared on the railways in 1916, when just over 4,000 tons of the ore was railed to Sekondi. Thereafter, other than a minor fluctuation during the post war depression, manganese traffic expanded rapidly to a figure of 507,073 tons or 54 per cent of total goods tonnage in 1929/30.

Clearly, four major freight items (machinery, coal, firewood, and manganese ore) constituted the bulk of the railway traffic by weight - accounting for 41 per cent in 1907, and 69 per cent in 1929/30. The fastest growing freights were firewood and manganese ore, reflecting increased exports of the latter and the growth of the mining sectors in

general.

One reason for the rapid expansion of the mining sectors is the fact that the mining companies benefited from a relatively low railway rate. As we have demonstrated in the previous chapter, agricultural traffic was employed to provide some degree of cross-subsidy to the mining sector - by 1926 average rate per ton mile stood at 2d for manganese ore and firewood, 1.4d for coal, while foodstuffs (both indigenous and imported) attracted 3.25d and cocoa a high 6.7d.³⁸ Thus, by providing not only an improved and a more efficient transport service, but also a relatively cheap one, the railways effected substantial savings in the working costs of the mining companies.

Despite the advantages offered to the mining industry, it did not prove to be the most important growth sector in the economy. Although the mines were a significant employer of labour, the total number of African mine workers between 1905 and 1929/30 amounted to no more than 15,000 per annum on the average³⁹ (as compared with cocoa farming whose employment capacity was estimated at one-sixth of the potential labour force by 1935). In addition to the numerous local wood cutters and fuel merchants upon whom no records were kept, the mines did create significant demands for local food production and protein supplies - fish from the coast and livestock from the North. Nevertheless, compared with cocoa farming, the extent of the mining industry's linkages with the Gold Coast economy was relatively weak.

On the other hand, the evidence suggests that significant benefits from mining accrued to the metropolitan economy. The purchase of mining machinery, stores and to a limited extent fuel, from Britain stimulated

the metropolitan industries. More significantly, other than token concession fees and royalties paid to the Chiefs and the Colonial Treasury, profits from the mines accrued principally to the British investors and shareholders. For instance, in the 19 year period from 1912 to 1930, the Ashanti Goldfields Corporation produced some 2 million fine ounces of gold valued at eight million pounds sterling upon which dividends of between 62.5 per cent and 87.5 per cent were paid annually.⁴⁰ As the most profitable mining concern in the country, the performance of Ashanti Goldfields was not entirely typical. Nevertheless, its dividend distribution gives some idea of the nature of the distribution of benefits from the mining industry.

The railways also had an impact on the development of forestry resources. Timber logs for export were the main forestry product carried on the railways. Prior to the railways the logs were cut as near to rivers as possible, and then floated down the coast. This made the Ankobra river and the port of Axim the centres of the earliest timber trade. Although the appearance of the railways changed matters considerably, the volume of timber trade was never as large as one might have expected it to be, given the amount of resources available. From 11,957 tons in 1907, the quantity of timber logs carried on the railways fell to 4,105 tons by 1912. Although the traffic recovered over the next two years, it fell drastically to just above a thousand tons per annum throughout the war years. Apart from shortage of shipping space, the decline in timber exports during the war is to be explained by the fact that the majority of the timber merchants were Germans whose businesses were closed down. Although the traffic recovered somewhat during the 1920's, it fluctuated only around 10,000 tons per annum on

the average. Clearly, the availability of rail transport was not the only determinant of the development of the timber trade. As the logs near the railways were depleted, it became necessary to move further afield. Thus, in the absence of motor lorries, such logs had to be dragged several miles from the forest to the railway lines. Moreover, at all the collection points along the tracks, special facilities such as cranes were required for loading the logs on to the trucks.⁴¹ Consequently, although timber exports enjoyed a relatively low railway rate, the growth of the industry fell below official expectations.

Apart from traffic in timber logs, the railways also facilitated the development of timber processing for domestic consumption. Although the Gold Coast was endowed with enormous forestry resources, initially the trend was for "raw" timber to be exported, in return for imported timber. As late as 1917, other than one small mill, located 12½ miles north of Sekondi, no proper plant for sawing timber existed in the Colony.⁴² The war time shortage of imports encouraged timber processing for domestic consumption. The traffic in local timber, which first appeared on the railways in 1913, increased from an annual average of 0.5 thousand tons between 1913 and 1916 to 1.6 thousand tons in 1917. In the following year, the General Manager reported a growing "native" industry in sawn timber, which was located chiefly at Tafo and Koforidua on the eastern line. In 1918 the tonnage of local sawn timber carried on the railways had doubled over that of 1917 - an increase which prompted the remark that sawn timber was an example of indigenous enterprise "profiteering" by the shortage of imports.⁴³

Despite the war time boost to timber processing, the industry

never reached any high levels in the years before 1929/30. Apart from the obvious difficulties of cutting and transporting logs, wood processing had to face such problems as the acquisition of machinery, technical and entrepreneurial skills, as well as competition from imported alternatives. Thus, although sawn timber continued to be carried on the railways, its tonnage did not exceed 2,000 per annum on the average throughout the 1920's.

The third and perhaps the most significant impact of the railways was the stimulation of the agricultural sector of the economy - the production of cocoa for export and the cultivation of foodstuffs for local consumption. First the role and impact of the railways upon the development of the cocoa industry. Was there a causal link between the timing of railway innovation and the rise of the Gold Coast cocoa industry? The export of cocoa which started on a very small scale during the 1890's grew rapidly after the turn of the century to become the country's most valuable export by 1910. Although cocoa had been grown in the Gold Coast by the Basel Mission as early as 1858, it was never adopted on a commercial scale because there was no market for the crop at that time.⁴⁴ In 1876, cocoa was introduced into Akwapim by Tetteh Quarshie who had worked on the cocoa plantations in Fernando Po, but the market for the crop was still very small.⁴⁵ (In fact, it was not until after 1900 when the Quaker firm of Cadbury started buying its cocoa from the Gold Coast instead of from the slave plantations of Sao Thome and Fernando Po that matters changed significantly). Thus, after the first exports of 80 lbs in 1891, expansion remained relatively slow so that by 1900 exports still amounted to just over 500 tons. But by 1905, when 5,000 tons were exported, it became apparent that cocoa farming had

been established on a firm basis. Allowing 5-7 years for cocoa's gestation period, it becomes evident that large scale cultivation of the plant began only from the 1890's.⁴⁶

Cocoa cultivation was initially concentrated in the Akwapim and Akyem Abwakwa areas and shipment was chiefly channelled through Accra. Of the 536 tons of cocoa exported from the Gold Coast in 1900 just over 500 tons was from the rapidly expanding areas around Kibi which was tapped by traditional trade routes and the main road from Accra. From the Krobo plantations around Begoro, 25 tons flowed down the Volta to Ada, while small amounts head-loaded to Prampram, Winneba and Cape Coast make up the remainder.⁴⁷

However, head-loading of cocoa was both a cumbersome and an expensive business at this time. In 1907, it took no less than 3 days to head-load the crop from Koforidua to Dodowa, from where the crop was barrell-rolled to Accra, and it cost between 2s and 3s per load for the last day's journey over the awkward Aburi hills - a figure which exceeded the producer price.⁴⁸

Given the high cost of portorage, the problem arises as to why cocoa farming should have expanded even into areas remote from the ports. Indeed the problem becomes all the more relevant because of the nature of the cocoa industry itself. To all intents and purposes, cocoa farming marked a turning point in the organisation of production in the Gold Coast. For the first time, on a large scale, exports were the result of "organised" cash-crop production, rather than the "gathering" of naturally-growing produce from the land.⁴⁹ Given the unique nature of cocoa investment on such a scale it seems unlikely that farmers would

have adopted the crop without some hopes or expectations of cheaper transport becoming available.

What of railway innovation? Like the early expansion of cocoa in the south-eastern parts of the country, the period from the 1890's to the turn of the century was one of survey mania, during which railway parties criss-crossed most parts of the Colony and to a lesser extent Ashanti (see Chaps 1-3). As proposals for railway construction intensified, they carried in their wake the promise of an impending transport revolution. The prospect of a new line often led not only to land speculation, but also to petitions from Chiefs for extensions into their territories.⁵⁰ Clearly, it is not unreasonable to suggest that some of the early cocoa farmers in the Eastern and Central Provinces must have planted in anticipation of the imminent arrival of the railways.

Having established a causal link albeit indirectly, between the emergence of cocoa cultivation in the south-eastern parts of the Colony and the timing of railway innovation, we now proceed to consider the diffusion of the crop into Ashanti and parts of the Western Province. Gareth Austin's study of the history of cocoa farming in Amansie, south Ashanti, provides a useful insight into the timing of the spread of cocoa into these parts of the country. According to Austin, although cocoa was introduced into Ashanti in 1896, its rapid expansion did not occur until after the 1900 Ashanti revolt.⁵¹ More importantly, Austin stated that it was the period 1901-1914 that was of supreme importance in the establishment of the industry in Amansie:

...it (cocoa) was so energetically adopted ... so that by 1914, the majority of available land had probably already been planted with the trees that were to yield over 10,000 tons of cocoa a year by 1921/2.⁵²

Thus, in Ashanti the crop was adopted on a significant scale only after 1900.

What of the timing of the pioneer western line? Started in 1898, the railway reached Tarkwa in 1900. Between 1901 and 1903 the line was quickly pushed into Ashanti partly with a view of putting down the 1900-1 revolt. Clearly, in Ashanti, the adoption of cocoa farming on a large scale followed close on the heels of the railways. What is more, once in operation, the railways were actively engaged in publicising the cash-crop "revolution". When the line opened to Kumasi in 1904, the authorities organised excursions to Sekondi for Ashanti Chiefs and their entourage, "to see the benefits of adapting themselves to the new mode of transportation, and of utilising their labour on the land."⁵³ On their return such leaders tried to encourage production for the market. In 1906, the General Manager reported that cocoa planting was being actively pursued in Ashanti, and wondered whether the crop had started going to the coast by portage.⁵⁴ Then the following year, a two-day agricultural show was organised at Sekondi from 29 to 30 November, during which exhibits were carried free of charge while railway fares were reduced. In addition no less than 450 Ashanti Chiefs and leaders were carried by special trains free of charge to attend the fair. Significant quantities of cocoa beans were said to have been brought back from the fair so that by the end of the year "nearly every village (in Ashanti) now possesses its own cocoa nursery."⁵⁵

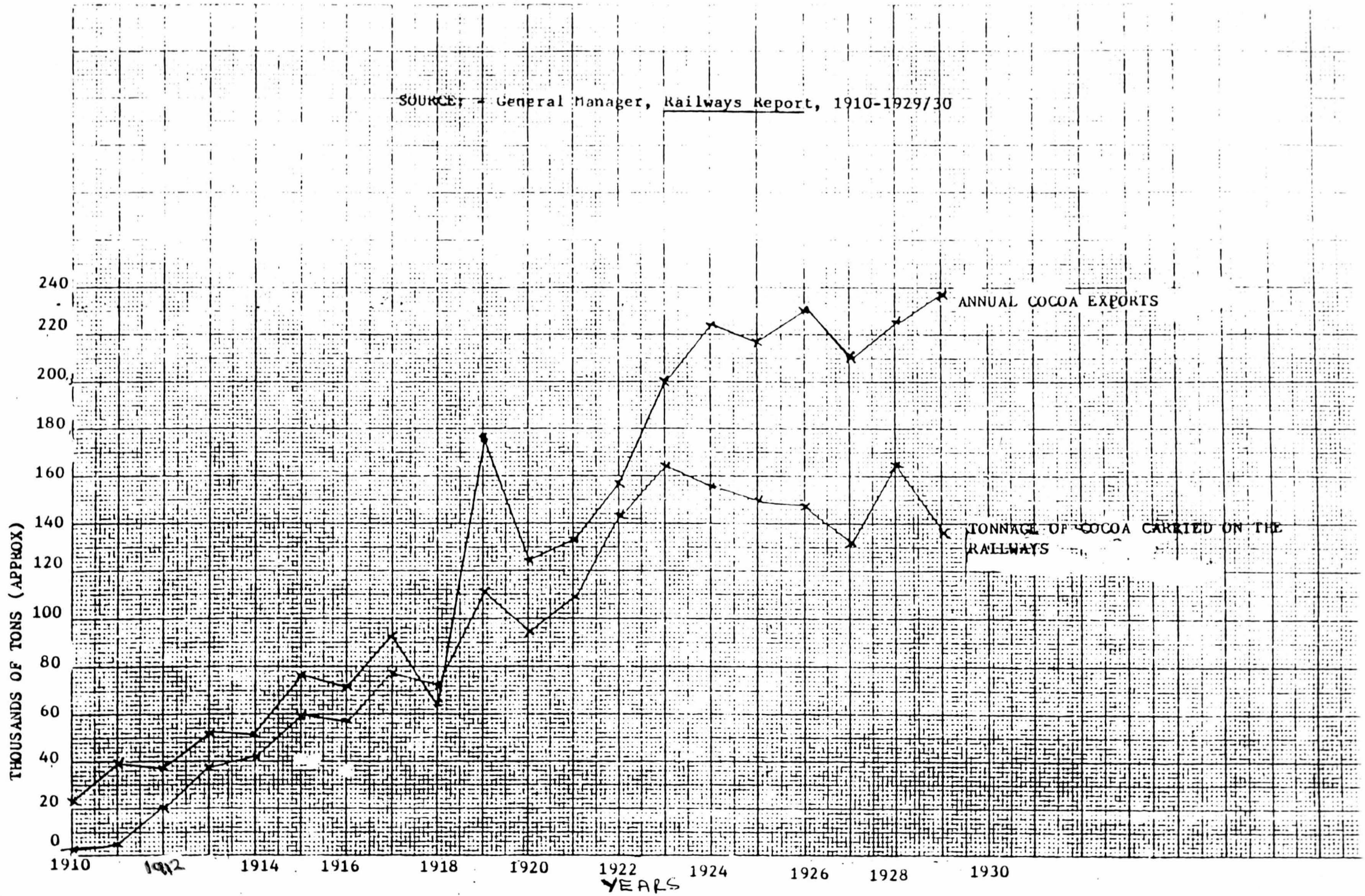
Clearly, if there was an indirect causal link between the emergence of cocoa farming in the Colony and the timing of transport innovation, the diffusion of the crop into Ashanti and parts of the Western Province depended even more directly upon the construction of the pioneer western line. I conclude that the Gold Coast cocoa industry, to borrow from L.H. Jenks, strongly felt the impact of the railways as an "idea."⁵⁶

The record of the railway's conveyance of cocoa to the ports tallies with the foregoing analysis. The western pioneer line, far away from the earliest cocoa growing areas, initially carried only a small percentage of the cocoa exports to the coast. Between 1904 and 1910, cocoa traffic amounted to no more than a thousand tons per annum on average on the railways. In 1910, the year when cocoa became the Colony's most valuable export, the western line carried only 8 per cent of the total exports to the coast. On the other hand, the opening of the eastern line brought about a dramatic change in the railway's conveyance of cocoa. Started in 1908, the Accra-Mangoase section opened to traffic in 1912. For the four-month period September to December 1912, 14,159 tons of cocoa were railed to Accra. The traffic then stabilised at around 28,000 tons over the next two years. Significantly, a high proportion of the cocoa traffic at this time had actually been stored over several years in anticipation of the arrival of the railways. Indeed, when the line was extended to Koforidua in 1915, the railways gave preference to produce of the current cocoa season so as to avoid the loading of rotten cocoa beans to the port.⁵⁷

As the tonnage of the railway cocoa traffic grew, so did its share of the national output until it accounted for over 70 per cent between 1913 and 1923/4. Thus, other than the odd year 1918 when shortage of shipping space meant that more cocoa beans were railed to the coast than steamers could load, both the national output and railway traffic moved in a remarkably close direction up until 1923/4. (Graph 2).

Although it was the eastern line that was largely responsible for the rise in railway cocoa traffic at this time (70 per cent in 1915), significant quantities of the beans began to appear on the western system as well. In 1912, the western line carried 6,593 tons of cocoa but by 1915, this figure had tripled to 19,191 tons. Unfortunately, separate figures for the tonnage of cocoa loaded from principal railway stations did not become available until 1926-27, which makes it impossible to ascertain exact trends in the spatial origin of cocoa traffic over time. Nevertheless, by the mid 1920's, cocoa farming had become well established in Ashanti and to a lesser extent the Western Province. Thus, by 1926-27 Kumasi was the most important cocoa station not only on the western line but throughout the entire network, with a tonnage of 35,586. Other important stations on the western system for cocoa traffic were Bekwai (12,964 tons), Dunkwa (8,312 tons), Akrokeri (5,274 tons), and Obuasi (1,448 tons).⁵⁸ Clearly, the western line which had promoted the diffusion of cocoa farming in Ashanti and parts of the Western Province in the first instance, had become a major carrier of the crop once the trees had started bearing fruits.

GRAPH 2
ANNUAL COCOA EXPORTS AND RAILWAY COCOA TRAFFIC, 1910-1929/30



However, the rapid spread of cocoa farming into new areas was also accompanied by the rise of motor traffic competition especially in the Eastern and Central Provinces. Notice the divergence in the movements of national output and railway cocoa traffic from 1923-4 (Graph 2). By the late 1920's the importance of the railways to the cocoa industry had completely shifted from the eastern line to the western system. In 1929/30, the eastern line accounted for only 38 per cent of the total railway traffic (as against 70 per cent 15 years previously) while the western line now carried 59 per cent. The newly constructed Central line carried only 4,026 tons of cocoa in that year, of which a mere 2,264 tons were actually forwarded to Takoradi, the rest being carried for short distances and unloaded at stations which were connected by road with the Central Province ports.⁵⁹

Clearly, other than the Central Province Railways, whose construction followed the availability of motor lorries, the role and impact of the railways in the development of the Gold Coast cocoa industry has so far been underestimated. More specifically, Kay's contention that railways were an unimportant factor in the rise of the cocoa industry is somehow misplaced. Eulogistic though McPhee might sound, he is vindicated.

While the railways may have aided the development of the cocoa industry more than some critics imply, reliance on rail transport was not without its costs for cocoa farming. In particular, railway rates on cocoa were set at relatively high levels. Although the beans normally accounted for less than 20 per cent of railway capacity on average, they contributed more than 50 per cent of the gross earnings. Given that direct taxation

was a politically sensitive issue in the Gold Coast, leading the government to depend upon indirect methods of taxation, the authorities came to regard high railway rates on cocoa as a means of raising revenues for the Colonial Treasury. Thus in 1923, Governor Guggisberg defended high cocoa tariffs as a "fair means of taxation."⁶⁰ In fact, some of the traffic policies pursued by the administration during the 1920's, more especially the "road gap" policy to defend railways from road competition, are to be explained by a concern to protect an important source of revenue for the colonial administration. These measures anticipated to some degree the fiscal functions of the Marketing Boards from the 1940's.

Cocoa farming was the most important growth sector of the Gold Coast economy. By 1935, total acreage was estimated at one million, and cocoa cultivation had an employment capacity of one-sixth of the potential labour force of the Colony, Ashanti and the Northern Territories.⁶¹ Perhaps more significantly, profits from cocoa farming, unlike mining, accrued principally to African producers, though some groups benefited more than others.

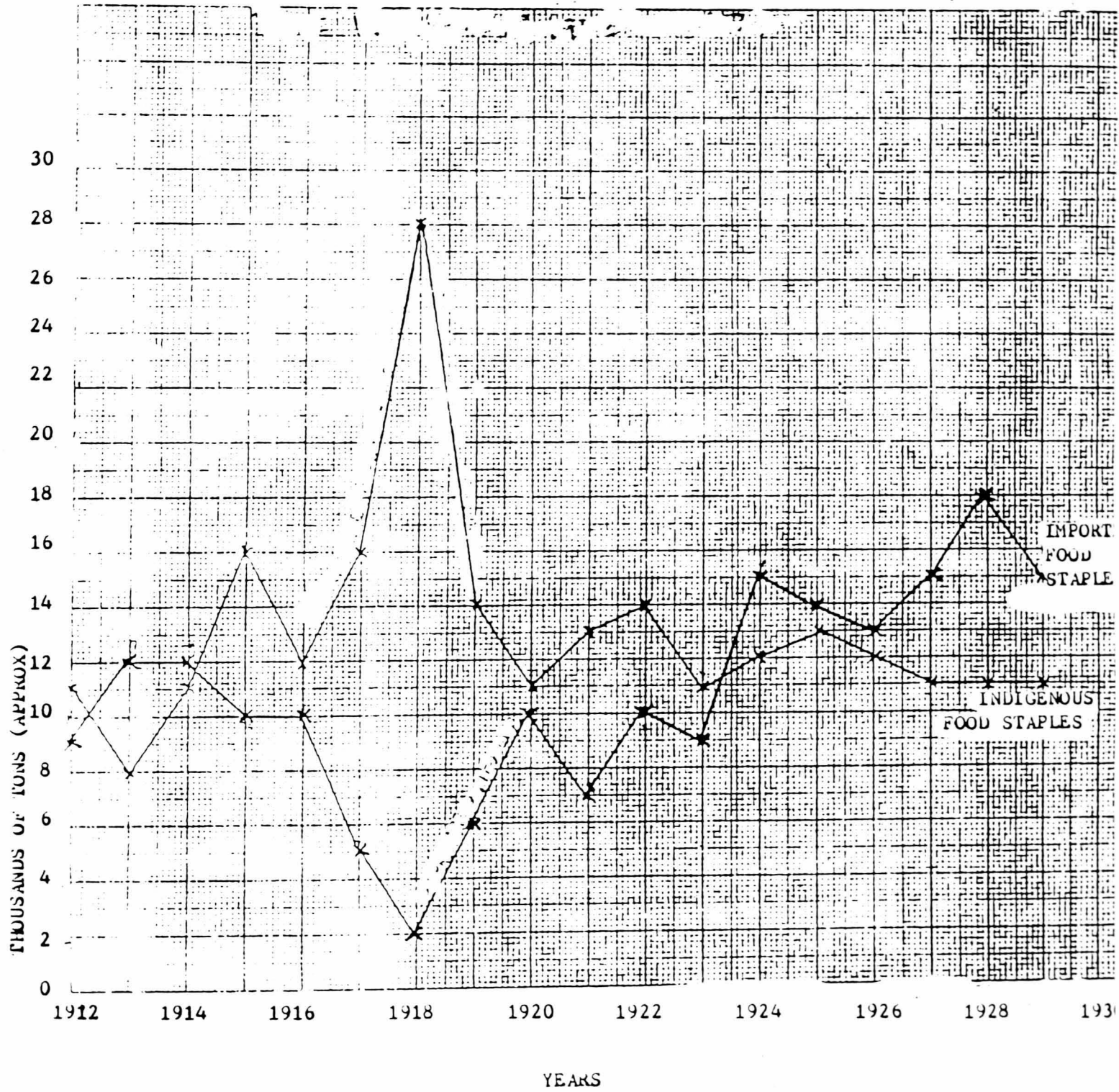
Cocoa production did have some linkages with other sectors of the economy. It created new demands for commercial food cropping, fishing and livestock production. Income from cocoa farming stimulated construction activities including the building of residential and business premises, timber processing, furniture works, and above all road building. Nevertheless, cocoa did not stimulate a large demand for inputs from other sectors. After harvesting, the beans were simply dried and exported, and therefore did not lead to the development of any

processing activity. Cocoa production remained labour intensive and such modest capital investment as was required - on cutlasses, pesticides, spraying machines and sacks for example - tended to be spent on imports from Europe. In addition, the greater proportion of the cocoa farmers' income was spent on imported consumer goods. Undoubtedly this brought a higher standard of living to some people, as "every big village now manages to obtain a fairly constant supply of frozen meat."⁶² But on the other hand, a significant proportion of imports consisted of what Lugard has called "sterile imports" - i.e. spirits. By 1927, the value of spirits imported into the Gold Coast amounted to no less than 20 per cent of the f.o.b. value of cocoa exports.⁶³ As the Omanhene of Brekum, Ashanti warned: "drinking two bottles of gin is equivalent to squandering the cost of two loads of cocoa."⁶⁴ In short the strong bias of cocoa farmers' expenditure towards imports, helps to explain, at least in part, cocoa farming's failure to encourage the growth of industries that could service it.

The other agricultural activity to benefit from the introduction and expansion of railways was food cultivation for local, internal markets. Although, around 1900, the railways brought in large amounts of food and provisions from Europe to meet the sudden demands created by mines and railway construction, indigenous food production was also quick to respond to such demands. Comprehensive data on the railways' conveyance of foodstuffs did not become available until 1912 (Graph 3). In that year, the tonnage of indigenous food items carried on the railways amounted to 11,000 as against 9,000 tons for imports. However, during the war years, consumption switched even more towards local commodities. Imported food traffic on the railways plummeted (from 12,000 tons in 1914 to 2,000 tons in 1918), while indigenous foodstuffs rose equally dramatically (from 12,000 tons in 1916 to as much as 28,000

GRAPH 3

THE MOVEMENT OF IMPORTED AND INDIGENOUS FOOD STAPLES
ON THE RAILWAYS, 1912-1930



Source:- General Manager, Railways Report, 1912-1929/30

tons in 1918). This rise in conveyance and consumption of local foodstuffs, "when the European community too, now depends to an unusual extent on native food,"⁶⁵ was caused by war-time import restrictions. The imposition of a 15 per cent war surcharge on rates for imported goods placed Gold Coast food producers in a comparatively favourable position from 1915 onwards. By 1916, rice cultivation, which originally started in 1912 on a small scale around the mining towns, had spread into most parts of the Western Province. The Senior Curator of Agriculture stationed at Tarkwa believed that the annual output amounted to "several thousands of bags," and "there is ready demand for the grain at a lower price than the imported stuff."⁶⁶ As the General Manager reported in 1912, "trade in native foodstuffs and dried fish has replaced imported rice and tinned herring which before the war, were popular and cheap articles of food."⁶⁷

The influence of the railway upon food production for sale was perhaps most significant in the western districts. Here, the Kroo, Mendi and Bassa "boys" who pioneered the local cultivation of rice were railway contract labourers from Sierra Leone and Liberia whose staple diet (unlike the plantains and cassavas of the Gold Coast) was rice. Thus, the railways contributed directly to the diversification of food crop production in the Gold Coast. However, opportunities for food cultivation for sale to the mines and the major sea port at Sekondi-Takoradi, together with firewood cutting and mine work, probably helps to explain the initially slow expansion of cocoa farming into the Western Province.

The recovery in the level of imported food traffic after 1918 resulted from renewed availability of imports after the war, together

with the removal of surcharges on rates for imported goods from 1923/4. Why local foodstuffs were unable to retain the markets they had enjoyed during the war, in the face of renewed import competition, is one of the many unexplored issues of Gold Coast economic history.

Although the railways thus provided significant forward linkages for the local economy, the distribution of the rail network was not without its negative effects on growth pattern of the Colonial economy. On the one hand, the railways facilitated the development of regional economic inequalities. Historically, the pattern of economic activity in the Gold Coast was always based on the dichotomy between forest and savannah in which the former played the dominant role. Not only were the Mande traders from the north and Europeans from the south both attracted by the resources of the forest (gold, kola nuts, slaves, palm produce and rubber), but the forest states of Ashanti, Akyem and Fante had also drawn upon northern slave labour for mining and agriculture in the south.⁶⁸ Nevertheless, the railways and for that matter Colonialism could be said to have accentuated and institutionalised such divisions. Given that there were local labour shortages in the Colony and Ashanti, leading government public works, the mining companies as well as cocoa farmers to depend on external sources of labour supply, the authorities came to regard the underdevelopment of the semi-arid savannah regions of the Volta and the Northern Territories as a means of maintaining a permanent cheap labour reserve for both expatriate and indigenous employers in the forest south. Thus in 1902, Governor Nathan decided against the construction of a Volta district line because "labour would be deflected from the mines and the Kumasi railway extension."⁶⁹ Indeed, some of the ironies of the

Guggisberg administrations's policy regarding the economic development of the Northern Territories, more especially the governor's decision against the construction of a northern line which had been intended to promote the diversification of agricultural exports, are to be explained by a concern to protect an important source of cheap labour for the mines and the cocoa industry. These measures were thus responsible to a large extent for the evolution of an uneven lopsided monocultural Colonial economy heavily dependent on cocoa exports but to a lesser extent gold, manganese and diamonds.

On the other hand, the railways facilitated the integration of the Gold Coast into the world economy. Pre-Colonial West Africa did have a long established external trade involving far more than a minority of chiefs and rich traders: "humble commoners both bought imported goods, and produced and traded a variety of export products."⁷⁰ Despite the apparent widespread participation in external commerce however, the contemporary observer, Mary Kingsley, could still write at the turn of the century that, "there is not a single thing Europe can sell to the native that is in the nature of a true necessity, a thing that the native must have or starve."⁷¹ - meaning that the West African societies were still at this time, relatively self-sufficient, and that dependence on the imports and exports trades was the exception rather than the rule. The construction and expansion of railways brought about a dramatic change in this position. Over the three decades between 1900 and 1930, the Gold Coast's external trade grew by more than ten times, imports by seven times, exports by nearly fourteen times. This expansion of external trade brought considerable income to the Colonial Administration and public revenues multiplied nine-fold while government expenditure

more than quadrupled over the same period. (See Chap. 7, Tables 7.4 and 7.6). Thus from the economic and political points of view of the metropolitan authorities, railway and harbour construction were largely successful: they not only stimulated export production for the metropolitan markets and created new markets for metropolitan products, but the increased imports and exports trades also generated substantial revenues for the administration of the Colony. Nevertheless, as Hopkins points out: "economic development by way of staple exports can be a precarious and lengthy process."⁷² Although there was a close correlation between fluctuations in the world prices, and fluctuations in local income and expenditure, West African producers had to accept the world price as given because they were unable to control the volume of their exports placed on the market. Thus, on an index in which 1968 = 100, the Gold Coast's net barter terms of trade (which is a measure of the changes in the quantity of imports which can be derived from a given unit of exports) deteriorated by almost 50 per cent between 1900/04 and 1925/29 though the income terms of trade (which is simply the total import-purchasing power of the country concerned) multiplied seven-fold.⁷³ This improvement in income terms of trade reflects a general expansion of export volumes so that in the absence of technological improvements in agriculture, the maintenance of existing levels of purchasing power of exports became the function of increased inputs of land and labour.

RAILWAYS, COMMERCE AND CRAFTS:

Railways also had an impact on commerce and traditional crafts. By stimulating trade mainly in imports and exports, railways were instrumental in transforming not only the spatial distribution and

organisation of commerce, but also the output and employment in craft production. Broadly speaking, there were three important aspects of change: 1) the physical penetration of European commercial and financial institutions into the interior; 2) a simultaneous expansion and contraction of opportunities for African merchants and traders; and 3) the changing fortunes of traditional crafts under the impact of mass-produced imported goods.

First, the penetration of expatriate trading firms and commercial banks. Before the advent of railways, European trading activity was confined to the coast, and trade was conducted with the interior through a network of independent African middlemen and traders. The control and organisation of this trade had long been a perennial source of conflict not only between the coastal principalities and inland state of Ashanti on the one hand, but also between European merchants and their African counterparts on the other.⁷⁴ Indeed the expansion of British Colonial rule beyond the frontiers of the Gold Coast Colony towards the end of the 19th century was partly a response to the call of English merchants for the protection and free access to the hinterland trade.⁷⁵

Although the imposition of British rule removed some of the institutional barriers to the smooth conduct of trade,⁷⁶ there was no immediate dramatic change in the traditional organisation of commerce. Not only did trade continue to operate through the long-established middleman system, but more importantly the European trading firms were reluctant to penetrate directly into the interior. One reason was that, in the absence of improved transports, the trading firms were unwilling to assume the risks of internal transportation. "European

companies", it was observed, "do not make use of the Volta, and individual merchants do so only if the canoe owner takes all risk of loss ..."⁷⁷ Despite active encouragement from the authorities who believed that increased penetration would augment trade which would in turn enhance the revenues of the newly acquired territories of Ashanti and the North,⁷⁸ there was little response from the European firms. As late as 1901, other than the Basel Mission's trading store at Akropong-Akwapim, and the firms of F. and A. Swanzy who operated branch stores at the river port towns of Akuse and Kpong on the Volta, there was no direct expatriate commercial activity in the interior.⁷⁹ Thus, the penetration of the trading firms into the interior lagged behind Colonial expansion.

On the other hand, the opening of the railways facilitated what A.G. Hopkins has called "the second partition of Africa"⁸⁰ - that is to say, the enlargement and delineation of territorial operations by the European merchant houses. The railways were directly responsible for the spatial diffusion of the trading firms into the interior. For instance, in 1904, the year the railway reached Kumasi, no less than eleven European firms opened branches there,⁸¹ and two years later the Bank of British West Africa followed, "and the town is now fast developing into the trading centre of the whole of Ashanti."⁸² The Ashanti-Obuasi Trading Company Limited, a subsidiary of Ashanti Goldfields Corporation, commenced operations at Obuasi, Sansu and Akrokeri by 1906.⁸³ Then the following year the Basel Mission Factory even took the unprecedented step of opening a branch store far beyond the Kumasi railhead at Kintampo, "and there appears to be no reason why other firms should not shortly follow its example, and for the town to

become a flourishing centre."⁸⁴ In the eastern cocoa belt, the penetration of the trading firms similarly followed close on the heels of the railways. In 1909, F. and A. Swanzy and two other European firms had branches at Nsawam and many others including the Bank of British West Africa were negotiating for building sites at principal railway stations.⁸⁵ By 1911, expatriate stores were firmly established at Koforidua, Kukurantumi, and Tafo.⁸⁶ From then onwards, this expansion of the European firms accelerated so that by 1915, "there are now numerous villages boasting one or more European stores, where a most varied assortment of goods can be obtained."⁸⁷ The railways also carried a large import traffic in specie, which was distributed regularly at all principal railway stations, "and the markets are filled with imports of greater variety ... besides locally grown foodstuffs, and they daily present scenes of the greatest activity."⁸⁸

Clearly, by opening up the country to European commercial activity the railways were instrumental in the spread of the money economy into many parts of the country.

The penetration and intensification of expatriate commercial activity into the interior had important implications for African traders and merchants. Elsewhere in West Africa, it is argued, penetration of the European firms resulted in the gradual decline of African middlemen from "wealthy entrepreneurs of the late 19th century to petty traders after 1930."⁸⁹ Unfortunately, no comparable attempt has been made to investigate the fortunes of the twentieth century Gold Coast middlemen.⁹⁰ Nevertheless, the evidence suggests that there was a simultaneous contraction and expansion of opportunities for African

traders and merchants.

The expansion of expatriate trading activity created more opportunities for retail trade for a larger number of Africans, especially women. At Kumasi, there were 15 markets held during the week, and the produce changed hands several times, "and trade is almost exclusively in the hands of petty traders, mostly women ..."⁹¹ Indeed, in most parts of the inaccessible rural areas were to be found itinerant small traders who hawked their goods from one village to another.⁹² Moreover, in several of the minor towns, Africans were employed in the expatriate branch stores either as salaried workers or commission agents.⁹³ Besides, the trading firms also employed a large number of Africans as produce brokers and sub-brokers, some of whom went to the bush to advance money to cocoa farmers while the crop was still on the trees.⁹⁴

Yet, at the same time as the trading firms were opening up opportunities for some, they were the cause of loss of employment for others. As the firms became more established in the interior, they tended to trade more directly with the African producers and consumers and this in turn meant a contraction of opportunities for the middleman. For instance by 1906, Kumasi was said to have appropriated to itself the trade formerly existing between Ashanti and the coast, "and the native now buys his goods from the European store instead of from the coast trader."⁹⁵ In South Ashanti, "people are now finding that their wants can be supplied nearer home," and "Obuasi is becoming more and more a trade centre of the Province," and "a lucrative trade for the Ashanti middleman is now closing."⁹⁶ Many independent African

merchants and traders also found themselves unable to compete with the bigger European companies. Rhoda Howard describes one example of European firms undercutting African traders and turning them into dependent retailers. In 1930, the United Africa Company informed the fish traders at Dunkwa of its plans to buy salt fish wholesale on the coast, transport it by rail, and sell it to the women who would become retailers. The traders protested to the authorities that the U.A.C. could turn such a monopoly over salt fish distribution to its own future advantage by retailing the fish as well.⁹⁷ In response to the women's complaint, one official noted that the process of the small traders being outsted by the bigger firms was inevitable, "and already with respect to Manchester cloths, cigarettes and so on, the women buy these on credit from the European stores, generally at a stones throw from the market itself, and proceed to retail them."⁹⁸

Despite the undercutting of the small traders, one must not, however, assume a wholesale elimination of the traditional independent middlemen and traders during the three decades before 1930. Firstly, there is evidence to suggest that some traders responded to the expatriate competition by simply shifting their traditional trading spheres of operation into new areas which were considered safe from European interference. For instance in 1905, the Chief Commissioner, Northern Territories, reported the case of a "displaced" coast merchant who had opened a large store for the sale of European goods at Kintampo "and is doing well."⁹⁹ Then the annual report for the following year noted an influx of coast traders into the Protectorate though "the most notable feature in this respect is the apathy shown by European traders on the coast to avail themselves of this movement."¹⁰⁰ By

1909, only one expatriate store operated in the whole of the Northern Territories.¹⁰¹ Thus, by shifting their spheres of operation, some traders may have managed to maintain their foothold in the distributive trade. Secondly, others survived in the middleman trade by specialising and restricting their dealings to particular commodities. For instance, as a consequence of high railway rates on spirits, Ashanti traders and Chiefs who had access to cheap human portage continued to outbid the European firms in the spirit trade well into the 1910's.¹⁰² - a position which became even strengthened by the availability of motor transport after the war.¹⁰³ Finally, the evidence also suggests that some traders may have successfully diversified into new commercial ventures. For instance, Nii Bonne, the wealthy Ga Chief who until the 1910's operated a prosperous middleman trade between Accra and Ashanti, had by the 1920's become a public works contractor. Some of his construction activities were said to have included street drains, houses and "factories" for Europeans, and the Dodowa market on contract to the Government.¹⁰⁴ In short, the sheer increase in the volume of the import-exports trades, together with possible adaptations among the traditional middlemen and traders may have helped to offset any loss of jobs through the undercutting of African traders by the expatriate firms.

The railways also had an impact on employment and output in the traditional crafts sector. By introducing mass produced imported goods, they forced local industries, previously sheltered from competition by the high costs of transport, to compete with imports. As in the case of the fortunes of African traders, however, the precise effects of imports on traditional crafts has been little investigated by historians so that the scale or extent and timing of any decline or contraction in

craft production is unclear. Railway sources and indeed Colonial administrative reports provide only cursory glimpses into the whole problem. For instance, in the case of the traditional weaving industry of the North, there is evidence to suggest that imports were ousting the northern supply in the Ashanti market by 1907.¹⁰⁵ The high prices and inferior quality of imports during the war seems to have helped to bring a temporary check to that process. As the Chief Commissioner of the Northern Territories reported in 1918, "native cloth is becoming increasingly popular again as an export commodity to Ashanti."¹⁰⁶ and 305 "loads" of the northern cloth were distributed by the railways in that year as against 30 loads during the previous year. But after the war, the situation may have returned to the pre-war position.

Again, one must not however, assume a wholesale decline of indigenous industries because there were local tastes and preferences. For instance, in the case of the expensive kente cloth of Ashanti, the evidence suggests that the local industry experienced little competition from imports. As Rattray points out, traditionally, the design and production of the cloth came under the control of the King who would either reserve them for the court or allocate them to great men or women in the Kingdom as symbols of their status.¹⁰⁷ Thus in Ashanti only the wealthy and officials of state wore woven kente cloth. As the Chief Commissioner reported in 1910, "European fabrics are no substitutes for country cloth of the handsome designs"¹⁰⁸ meaning that the local kente industry which was used by the aristocracy was little affected by mass imports. Moreover, as Inez Sutton's study of the Ada salt trade demonstrates, despite the availability of imported salt, trade in the local commodity expanded throughout the Colonial period partly because

people preferred the taste of the Ada salt and partly too because people believed that it enhanced the virility of "men."¹⁰⁹

RAILWAYS, URBANISATION, AND PUBLIC HEALTH:

The railways facilitated the imperial objectives of opening up the country to private enterprise and to effective colonial rule. The new railway stations became not only centres for the dissemination of the money economy and of new ideas, but also places where the agencies of colonial law and order were established and from whence their policies were implemented. As the nuclei for administrative and commercial centres, the new railway stations also became the focal points for urban development. This section examines three important aspects in which the railways influenced urban development in the Gold Coast:-

- 1) their impact on long established settlements whose commercial or administrative importance attracted rail connection;
- 2) their role in the creation of entirely new urban settlements;
- and 3) their negative impacts on traditionally important settlements which declined or stagnated as a consequence of shifts in centres of economic activity following railway construction.

Accra and Kumasi are the most spectacular examples of towns among the first category of urban settlements. Kumasi, the capital of Ashanti has always been the most important administrative, cultural and commercial focus of the empire. Dupuis, in 1817, estimated Kumasi's population to be between 12,000 and 15,000.¹¹⁰ In addition to the King's palace, the town had a large market place, temples and sacrificial groves, a Hausa traders' Zongo with a large muslim population, and a British Embassy where European visitors to the town lived.

This position of Kumasi as capital of Ashanti made the town the object of British expansionary forces from 1874, onwards and eventually the military target of the Western railway extension in 1900.

One of the most detailed and authoritative descriptions of Kumasi's physical landscape was the intelligence report prepared by the War Office in the aftermath of the 1896 invasion and which was later made available to the railway Consulting Engineers. In this report, Kumasi was described as a "nucleated" settlement built around the King's palace. The town itself was located on a compact elevated ground, 950 feet above sea level and was almost surrounded by the unhealthy swamps of the East and West Nsuben rivers in the form of an arch. The only natural outlet to the town was in the south westerly direction between the openings of the two Nsubens.¹¹¹ The strategic significance of Kumasi's relief is obvious.

From the beginning the choice of Kumasi as railhead posed serious planning problems to the engineers. Although the town contained "waste ground and remains of houses that had once been occupied," it was said to have reached its limits of expansion.¹¹² Thus to push the railway line straight into the heart of the town involved not only the problem of attaining a high altitude, but even within the township itself there was hardly any suitable space for allocation to railway buildings and commercial activity. On the other hand, to locate the railhead outside Kumasi town would entail not only a heavy expenditure on drainage, but military imperatives also made delays unwarranted. For this reason, the authorities opted for the former option since it also had the advantage of affording direct rail link with the British

embassy now built into a "fort."¹¹³

The imposition of British rule over Ashanti and the re-establishment of Kumasi as the administrative centre of Ashanti, together with the arrival of the railways there in 1903 reinvigorated the process of urban development. By 1906, "the town continues to extend" and "the old-thatched covered houses are rapidly disappearing, their places being taken by solid 'swish' buildings with iron or shingle roofs."¹¹⁴

Although Kumasi was fast growing, the town could neither expand in size nor accommodate the rising population for obvious environmental reasons. An early feature of Kumasi's urban development therefore, was the proliferation of a larger number of small villages in the outskirts of the town whose residents commuted daily with the capital: "filled to overflowing in the morning, Kumasi has, towards evening, a comparatively deserted appearance."¹¹⁵ Within the town itself, the building of residential and commercial premises were so rapid that by 1915, there was "a high degree of congestion in most parts of the town, especially the area on either side of the railway track and close to the railway station."¹¹⁶ Indeed when epidemic outbreaks struck the town in 1918 and 1924, it was devastating especially in the overcrowded Zongo slums.¹¹⁷

Already during the war, the need for the development of entirely new settlement sites at Kumasi was becoming obvious. Significantly however, the main impetus for change came from the decision to extend the Eastern railway to Kumasi so as to link the two systems. In order to enter Kumasi, the Accra railway had to traverse the East Nsuben main outfall and so a comprehensive drainage scheme was launched as part of the railway extension programme. The swamps near the Ejisu road were

drained, and the reclaimed area developed into a railway station with commercial premises adjacent to it. To the north of the railway station the swamps at Kejetia were reclaimed and a market built there which was capable of accommodating 900 traders, while to the south, was located a neighbourhood area, with private houses and government premises.¹¹⁸ Clearly, the railways, after having initially accelerated congestion in the old Kumasi town, initiated the development of entirely new and well planned settlements which in Guggisberg's words "has made Kumasi the garden city of West Africa."¹¹⁹ Today, a visitor to Kumasi will not know that such outlying districts surrounding the old township, as new Tafo, Suntresu, Suame, the Residency, Cadbury House and Amakom were once the swampy valleys which acted as natural lines of defense for the ancient city.

Accra, the other traditionally important settlement which attracted rail connection differed from Kumasi in many respects not least by its early European influence. As one of the most flourishing sea ports since the advent of Europeans on the coast, Accra had by 1877 also become the administrative capital of the newly established British Colonial Administration.¹²⁰ At the turn of the century, Accra constituted of the James and Ussher Town complex which the Guggisbergs described as "an unimposing ramshackle collection of weather-beaten white-washed houses and huts."¹²¹ Thus Accra's unplanned agglomeration of buildings contrasts sharply with the traditionally planned Kumasi.

Unlike the "nucleated" ancient city of Ashanti, however, Accra had an open countryside and so there was no environmental obstacle to the physical expansion of the town. Thus when a Railway Site Board was

established for the town in 1908, to acquire land for railway works, it was easy to pursue a liberal acquisitive policy covering the entire townships of present day Adabraka, Osu, Ridge and Contonments.¹²² The railway station itself was located north of Ipon town, a small non-Ga native settlement which was a quarter of a mile from the beach. Ample land was allocated near the railway station for workshops and offices as well as a designated merchants' plots where the Seylwin Market was eventually built in 1922.

Perhaps the most significant impact of the railway upon the urban landscape of Accra however, lay in the outward extension of the township. In 1913, one year after the Accra railway opened, a 12 mile Camden commuter service was introduced between the beach and the outlying farming settlements of Achimota which in the General Manager's words was intended to "push the native towns further and further away from the coast" so as to make room for commercial and government premises.¹²³ The availability of a railway service made the area on either side of the railway track the centre of gravity for the earliest proliferation of settlements and by 1920 when a town planning programme was launched for Accra one of its aims was to redress the imbalance in the township by encouraging new settlements away from the railways.¹²⁴ Thus, in the case of the traditionally important towns, the main function of the railways was to speed up the process of urban expansion.

The railways also created entirely new urban centres. Although Sekondi has always been visited by "irregularly scheduled trading vessels," it failed to develop into a settlement of any significance so that by 1898, the town was still "a mere fishing village consisting of a few mud huts."¹²⁵ The location of Sekondi as the coastal terminus

of the western pioneer line transformed the former fishing village not only into a prosperous commercial centre, but also an important administrative town. As the town's commercial and administrative importance grew, Sekondi's population rose from "a few hundreds" in 1898, to 9,500 by 1911 and again to 16,900 by 1921.¹²⁶

Sekondi's rise to prominence was however, not matched by the provision of houses and one of the earliest features of the town was the proliferation of an overcrowded slum constructed out of corrugated iron sheets and metal scraps which was nicknamed "Tin Town" at the northern end of the railway station, and close to the European township.¹²⁷ Insanitary conditions at Tin Town together with its close proximity to the European settlement attracted protests from the expatriate community and so in 1909 the town was removed and relocated near Ketan, 3 miles from the railway station.¹²⁸ Here too, availability of railway commuter service facilitated the spatial expansion of the town. "Location", the railway headquarters and workshop complex was later sited there as well.

In addition to the major sea port of Sekondi the railways spawned a number of new settlements and converted several minor villages into important market towns. For instance, Koforidua in 1900 was only a small village and was still outside the mainstream of British jurisdiction.¹²⁹ The increase in cocoa production together with the railway's arrival there in 1916 transformed Koforidua into the commercial and administrative centre of the Eastern Province where in addition to the European firms, Hausas traded in kola and meat, while Logosians were buying and trading cocoa.¹³⁰ Similarly, Nkawkaw started in 1923 as "a collection of houses around a railway station" but soon became a major

nodal point for the expanding cocoa growing areas of the Kwahu plateau towns and from whence farmers traded their produce for imported goods. Juaso, New Mangoase, and Konango were also minor rural settlements which developed into market towns shortly after becoming railway station towns.

On the other hand, while contributing to the growth of some towns, the railways caused others to lose their economic importance. For example, Cape Coast, the key terminus of the inland trade, had been historically the most important commercial and administrative centre on the coast. However, as the major developments in cocoa farming and mining following railway construction occurred outside Cape Coast's sphere of influence, the large trading firms shifted their headquarters to the ports of Sekondi and Accra. Thus, between 1891 and 1911, Cape Coast's population stagnated at just over 11,000 and although there was an increase thereafter, the town's population growth lagged behind that of Accra, Sekondi-Takoradi and Kumasi. The growth rates for the four cities between 1921 and 1931 are: Sekondi, 6.0; Kumasi, 4.6; Accra, 4.0; and Cape Coast, 1.7.¹³¹ As a consequence of losing its traditionally dominant commercial and administrative functions to Accra and Sekondi, the only position Cape Coast managed to maintain was as a centre of education. Similarly, the river port towns of Kpong and Akuse on the Volta dwindled in size after they ceased functioning as ports because both the expatriate firms and the seat of the Provincial administration were moved to the new railway town of Koforidua.

The railways were instrumental in the provision of social services in most of the growing urban areas. The origin of modern

electricity schemes, water works, and to a limited extent health facilities were closely related to the needs of the Railways. For instance, the idea of supplying water to the urban areas was a result of chronic water shortages that hit the trains. Thus, the Railways Department embarked upon the drilling of wells along the line which in turn led to the involvement of the Railways in the commercial sale of water to the public.¹³² Similarly, the first electricity plant to be installed in the Gold Coast was that of the Railway Workshop at Sekondi which started operating in 1918. Later, when Takoradi was built, the Sekondi power station was expanded to cater for the needs of the harbour and township. In Accra, electricity power from the railway workshop in 1924 provided the streets of Osu and James Town with their first electric lighting system in place of oil lamps.¹³³ Indeed, during the War, the Colonial Office had considered building a dam across the Volta so as to generate electricity power for the railways and the mines.¹³⁴ Finally, the railways pioneered the diffusion of health facilities. The first government hospital to be established outside Accra was the one built at Sekondi in 1898 for railway construction labour. The Obuasi hospital was also built in 1900 for the same purpose, though it was sold to the mines on completion of the railway extension.¹³⁵

On the other hand, railway development also had serious implications for public health. As transport agents, the railways not only facilitated the spread of epidemic disease,¹³⁶ but the growing urban centres were also breeding grounds from whence diseases were disseminated into the rural areas. Thus, "syphilis," in the Northern Territories was called the "Kumasi Sickness" because it was associated with returnee migrant workers from the south.¹³⁷ In short, given that Colonial

social services were hampered by lack of staff and funding, leading the authorities to concentrate their meagre facilities on the expatriate community and African government employees in the urban areas, the role of the railways as agents of modernisation were partially offset by their negative impacts, especially on the rural areas.

CONCLUSION

The Gold Coast railway system was so small in mileage that probably no more than 10 per cent of the country's total land surface could be said to have come under the direct influence of the entire network. As a consumer industry, the railways established very weak backward linkages with the rest of the Gold Coast economy. Most materials and equipment were imported from Britain. The only indigenous production that seems to have been stimulated was wood for fuel, ballast production from quarries, and to a limited extent, wood processing for construction and maintenance of the railways. Other than these, the railways derived little of their needs from the Colonial economy. The reasons for this lay not only in the absence of established capital goods industries that could serve the needs of the railways, but also in Colonial policy which demanded that any materials needed in the Colonies must be imported from the "mother country" - in order to stimulate British industry. In addition to this, the participation of the Crown Agents in the commercial organisation of Crown Colony public work construction projects also meant that the metropolitan authorities were keen on maintaining the status quo. Hence, there were times when incentives to develop local industries to serve the railways were deliberately halted. Further, the larger part of the railway wage bill

found its way back into British coffers, as both European and to a lesser extent, African employees spent a large part of their earnings on imported consumer goods.

Although the Gold Coast economy remained little influenced by backward linkages from the railways, the provision of transport facilities by contrast strongly affected economic activity because of its availability, reliability and above all, reduction in costs. The benefits of forward linkages accrued disproportionately to the expatriate mining sector not only because the location of the rail routes and associated ports and harbours favoured them but also because they benefited from cheaper railway rates more than any other sector. Thus, the railways' conveyance of heavy machinery and stores to the mines effected technological changes in the industry, more especially in the field of deep-level mining. As well as carrying imported mining inputs, the railways transported large amounts of cheap fuel (local firewood) annually to the mines, in addition to the raiing of bulky manganese ore to the ports for exports. Not surprisingly then mining traffic constituted the bulk of all railway traffic - amounting to 69 per cent of total railway traffic by weight in 1929. Despite the special advantages that the mines derived from rail transport, it was the sector that benefited the Gold Coast economy least as all profits went to the British investors. Thus, it can safely be argued that the railways primarily served metropolitan mining interests more than expatriate and indigenous agrarian needs.

The railways also had significant impacts on other sectors of the economy. The export of timber logs, and to a lesser extent wood processing for domestic consumption, saw a modest growth, as did food-

cropping for local sales, especially when war time restrictions caused a drop in the levels of imported food items. Also the railways made a special contribution to the diversification in food crops in the Colony and Ashanti when migrant labourers from Sierra Leone and Liberia introduced rice cultivation to these regions for the first time.

But the railways major contribution to the Gold Coast's economic growth was to be found in the sphere of cocoa production for exports. Here, Kay's interpretation that the railways had little impact on cocoa farming is wrong. It is true that railway charges, and the location of the routes and sea ports, did not favour the cocoa farmer. Only the Accra-Tafo section was constructed with cocoa producers in mind. But cocoa farmers certainly did use the lines to transport the crop in large quantities to the ports, and in some places the idea that railways were to be constructed within the near future may well have encouraged cultivation. In the Western Province and Ashanti in particular cocoa was actually planted because of the presence of the railways. Cocoa was thus carried on the railways to a significant extent and high railway rates on the crop were to be the Government's way of indirectly taxing the African population.

Cocoa farming was the most important growth sector in the Gold Coast economy, and it was a sector whose profits accrued directly to the African producers. But again, like mining, cocoa production did not really lead to the establishment of other industries that could service it, as cocoa farmers too spent a large percentage of their income on European imported goods.

As a consequence of stimulating activity in the fields of cocoa farming and mining, the railways helped to introduce the Gold

Coast in a major way to world markets. A society that had been relatively self-sufficient was introduced to European imported goods upon which it became dependent. But because export commodity producers were unable to have any influence over world prices, the African exporters found themselves forced to put more and more land and labour into production in order to maintain their existing import purchasing power. Furthermore the fact that the railways were restricted to the southern part of the country meant that the Northern Territories remained isolated and relatively backward, and so became a source of cheap labour to be used in the mines, on the railways and in the cocoa industry.

The introduction and expansion of the railways also affected the way commerce was organised as well as traditional craft production. In fact it was not until the railways were in operation that expatriate traders, merchants and bankers ventured into the hinterland. Prior to this they had restricted their activities to the coastal areas, and relied upon African middlemen to carry out commercial activities further inland. The evidence suggests that as expatriate commercial endeavour spread throughout the Gold Coast, there was a corresponding decline in the opportunities available for the older, established African traders and merchants. On the other hand, this change in trading methods created more opportunities in retail trade for a larger number of Africans, especially women who were now selling European imported goods. Thus Gold Coast trading saw a massive change. The established African merchants were on the decline whilst European traders and an entirely new stratum of African society began participating in the distributive trades. Not only were the middlemen finding their services superfluous, but African traders found themselves being undercut by European trading

firms. But African middleman traders were not wiped out altogether. Some shifted their traditional spheres to new areas particularly the Northern Territories, which were not affected by the penetration of the expatriate firms, while others diversified their operations into other sectors.

It would seem that the mass importation of European goods affected traditional craft industries as well. Although evidence is slight, it is interesting to note that in the case of the traditional weaving industry of the North, European imported cotton goods did oust the northern supply in the Ashanti markets except for the war years. On the other hand, certain traditional industries seemed to have survived because Africans either preferred their products to the European imports - as was the case with Ada salt - or because no real imported substitutes were available - as was the case with the traditional kente cloth of Ashanti.

With the spread of the railways and of European trading came new urban development - in particular the growth of such towns as Accra, Kumasi and Sekondi-Takoradi. But on the other hand the construction of the railways caused such towns as Cape Coast and Kpong, which were not located on rail routes, to lose their commercial and administrative importance. Finally, the railways were instrumental in providing social services to these growing urban areas. Modern electricity schemes, water supplies as well as public health facilities followed close on the heels of the railways. But because such facilities were mainly confined to the urban centres, any modernisation effects of the railways were partially offset by their role in facilitating the spread of epidemic diseases, particularly into the rural communities.

NOTES TO CHAPTER 10

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CONCLUSION

This final chapter seeks to relate the findings of the individual chapters above to the concern of the thesis as a whole: - the connection between railway innovation and economic development. In what ways, if any, did railways in the Gold Coast imitate the experiences of their western progenitors? Can the history of railways in the Gold Coast serve as a paradigm for the introduction and expansion of railways throughout Colonial Africa? What is the significance of the Gold Coast's experience for our understanding of the relationship between railway construction and economic growth in the less developed economies of Africa, Asia and Latin America?

In contrast to Africa, the literature on the history of railways in the advanced industrial nations is noted for its relative consensus about the "progressive" contribution which railways have made to economic development. Despite the attempts by "new economic history" to play down the traditional indispensability thesis, it is nevertheless agreed that the potentialities of railways were dramatically realised in many parts of Europe and North America. For instance, Albert Fishlow has argued that the prime beneficiary of railway development during the antebellum period in the United States, was not industry but agriculture. He also pointed out that the railways were not crucial to the increased pace of economic activity before the Civil War, and that the rapid growth of domestic industry was not dependent on railways' demands for iron.¹ Similarly, Fogel concluded that, despite its dramatically rapid growth, the railways did not make

a substantial contribution to the production potential of the U.S.² Hawke, applying the "social saving theory" to Britain, asked the question: what would have been the cost of dispensing with railways and transporting passengers and goods by road and canal? His findings were that railway services in 1865 represented a social saving of between 7 and 11 per cent of the net national income of England and Wales.³ Church took Hawke's figures to demonstrate that "railways as providers of transport services made a smaller contribution to the national economy than has been widely assumed."⁴ O'Brien, on the other hand, has shown how it is possible to make the social saving ratio appear more impressive, by considering the implications of making up the income sacrificed over the long term. Thus, for 1865-70, closure of the railways would necessitate a 40 per cent increase in the growth rate, a similar increase in the gross investment rate, and a 5 per cent reduction in annual expenditure.⁵ But Gourvish remained unconvinced as to whether the social saving estimates "really mean very much at all,"⁶ reasserting the importance of "externalities" or "spin-off" effects from railways to industry and commerce - the majority of which defy precise quantification. Clearly, then, the "problem" about western railway historiography, unlike that in Africa or the Third World, is not so much about whether railways had a positive effect on economic development, but rather by how much - a task that continues to elude even "cliometrics."

Given that economic growth is a phenomenon which occurs both over time and in societies which may be widely different in character, similar causes may operate in very dissimilar environments, and lead

to obtrusive differences in the timing, the pace, and many other facets of economic change. As a leading authority on economic growth stated:

AS to conditions of growth, I started with the assumption that these conditions differ for different historical situations and that, while they may have some common elements, they are probably to some extent unique to each case, including the same country in different stages of its development, and different countries in generally similar stages of development as well as at different stages."⁷

Such national and inter-temporal differences stand out distinctively when we consider the opportunities afforded by railway innovation upon the very dissimilar social, political and economic environments of the advanced industrial West and Colonial Africa. Below, the broad characteristic features of railway development in the industrial economies and a typical colonial economy (the Gold Coast) are juxtaposed:

A An Advanced Industrial Economy (Britain).⁸

1) Initiative: Planned by local businessmen and politicians; reflects their perception of transport needs and potential; integrates the national economy - domestic as well as exports and imports trades.

2) Capital: Raising of capital stimulates development of local financial institutions; raises levels of savings and investments, and helps to induce booms and alleviate depressions.

3) Technology: Locally supplied, or initially imported, but gradually built locally by indigenous metals industry; boost to total demand

B A Typical Colonial Economy (Gold Coast).

Planned by "alien" agency; more receptive to foreign businessmen and politicians; bias towards serving foreign need - rather than internal commerce.

Borrowed from abroad - by state - no stimulus to local capital formation; leads to external financial obligations and balance of payments problems.

Invariably imported - no stimulus to domestic heavy industrial sector; encourages dependence on external sources of technology.

(particularly during construction) encourages economies of scale, leading to accelerated technical progress in metals and engineering industries.

4) Management and Technical Skills: Locally generated - creating employment for new strata of society - engineers, surveyors, technicians, contractors; encourages creation of establishments for training, leading to continuous reproduction of technical and managerial knowledge; potential for diffusion to other sectors of the economy are much higher.

Imported - expensive - leakage of expenditure (salaries and pensions etc.) overseas; slow indigenization - lower levels of skills acquisition and diffusion.

5) Tariff Policy: Basically competition, with company profits as the major aim; special recognition for the development of the trade of particular regions - widens the market and leads to specialisation of commerce and industry.

Monopoly, with revenue to Colonial Treasury as the major aim; discriminatory prices, bias in favour of expatriate mining vis-a-vis indigenous cocoa and agrarian interests, but generally promotes external rather than internal commerce.

Because of the reasons enumerated above, the "progressive" influence of railways was bound to be less in a colonial or less developed economy. In Western Europe, not only did an active business class evolve over a period of some hundreds of years, but more importantly, large-scale ventures in trade, mining and canals were not uncommon before the nineteenth century. Because Britain and other railway developers had already achieved considerable industrial capacity before the advent of the iron horse, they were able to capture the indirect benefits of backward linkages from their own railway ventures, and indeed become suppliers of technology and equipment to the rest of the world. Thus backward linkages from railways to

industrial development in the advanced economies, contrasts sharply with the case of the Gold Coast, where railway construction provided virtually no stimulus for other sectors of the local economy. Nor did railways in the Gold Coast help to create "economic methods and institutions" which had beneficial effects on commerce and industry.

Nevertheless, in one major respect - cheapening of transport costs - the effects of railway construction was potentially greater in a less developed economy. The more effective a country's waterborne and road transports are, the smaller the gains accruing to the economy from its investment in railways. Conversely, countries badly endowed with navigable rivers and a terrain less conducive to the construction of canals as well as poor coastal shipping facilities, tend to gain most from their investment in railways. Thus in Britain, the U.S. and France, where railways superceded canals and road carriage, benefits from forward linkages were relatively smaller. "British railways," Mitchell noted, "were built with existing traffic in mind" and

the coming of the railways in Britain did not lead to a wavelike profusion of new enterprises of many sorts simply because there were already a great many enterprises with their traffic already flowing in established channels.⁹

Furthermore, Mitchell noted, other than the perishable trade - fresh meat, fish, milk and vegetables - railways in Britain "did not ... simply make possible what had been previously impossible."¹⁰

In the Gold Coast by contrast, it is apt to assert that railways "made possible what had been previously impossible." Before the advent of railways, transportation was almost exclusively carried

out by human portage. Unlike Britain, the U.S., or even Tsarist Russia, the Gold Coast had no river system suitable for use in transportation. Moreover, since most of the population and economic activity had always been located far from the coast in the interior forest regions, coastal shipping never played the role in the Gold Coast that it did in Europe and the U.S. Gains from the provision of transport services were therefore dramatic. For instance, railway rates in 1903 represented well above a 90 per cent reduction in portage costs, and between 1903 and 1922 tariffs fell by a further 25 per cent. Indeed, it is impossible to perceive the widening of the market or expansion of export production in the Gold Coast between 1890 and 1930, without railway innovation. Opportunities to produce for world markets did bring real, if still modest, improvement in incomes and standards of living for the members of the African society involved. Nevertheless, the pattern of railway development tended to reinforce production for external markets, rather than internal, leading to the growth of a lopsided export-oriented economy with regional economic inequalities and income disparities.

How far was the experience of the Gold Coast typical of Africa, and of the Third World in general? The few detailed studies of railways in Colonial Africa tend to concentrate on discussion of policy decisions leading to the construction and operation of the lines, as well as the mobilisation of funds to pay for them¹¹ while ignoring the wider issues of the relationship between railways and economic development. This inevitably makes any scope for generalisation limited. Nevertheless, the story of the Gold Coast railways does provide several points of comparison for railways in other parts of the continent, not least because of the

initiative which invariably came from "alien" authorities.

Broadly speaking, in most parts of Africa, railways were constructed in the twentieth century although they may have been planned earlier. The systems constructed most expeditiously were those viewed as strategically vital or commercially valuable. In West and East Africa, most of the railways were constructed primarily with a view to exploiting the export possibilities of agricultural and mineral deposits. These systems were, for the most part, state enterprises as opposed to being financed and constructed by private entrepreneurs. In two instances, in the Sudan and Uganda, the railways were built for strategic reasons. On the other hand, Central and South Africa contained a mixture of systems, some state, some private, but all designed to exploit the mineral deposits of the region. Throughout the continent, the railways that were established, with the exception of South Africa, were directed to either a mineral deposit or an export crop. They were built from a port from the coast into the hinterland. They did not constitute a dense communication network anywhere, except in South Africa, where branch lines were constructed during the 1900's to link the farming districts with the major trunk routes established earlier between the ports and the mines. Thus, apart from the latter system, railway densities per square mile remained among the lowest in the world, so that the greater proportion of the African land-mass remained outside the direct influence of a railway line.¹²

As was in the case of the Gold Coast, railways were no "leading sector" anywhere in Colonial Africa. The backward linkages from railway construction accrued to metropolitan heavy metal and engineering

industries, so that as a consumer industry, the railways established no direct multiplier effect with the African economies. All manufactured goods, equipment and skills came from Europe, and except for South Africa and later Nigeria, even fuel was imported as bunker coal.¹³ In East Africa, the British even brought in Indians as manual labour, while the Belgians in the Congo recruited Chinese indentured workers for construction. Nevertheless, as the experience of the Gold Coast railways convincingly demonstrated, in a continent chronically deficient in natural internal means of transport and communications, railways made possible what had been previously impossible. In most places, the volume in *transportable* goods was not large from the beginning, but everywhere the lines penetrated, local entrepreneurs and foreign capitalists proved highly responsive, so that mining and agricultural export production boomed. Claims that certain Colonial dependencies were mere creations of railways¹⁴ are probably a bit exaggerated. What can be said though, is that railways were among the most important, or even the prime, contributing factors to the expansion of commerce, and to such economic growth as occurred during the colonial era. In this regard, Crowder may be right in saying that railways represented the major economic legacy of the colonial powers in West Africa: "If the Colonial powers can be said in any way to have brought economic revolution, it is through the construction of railways."¹⁵

The transport "revolution" though was not only superficial in extent, because of its failure to incorporate the majority of the African population into the mainstream of economic activity, but the period of railways "indispensability" in Africa also appeared to be short lived. While the "pioneer" railway lines constructed before the

First World War were undoubtedly crucial in opening up African hinterlands to trade and commerce, the same cannot be said of the subsequent extensions to the systems. O'Connor's carefully documented study concluded that the lines serving Uganda "appear to have been of progressively decreasing importance in terms of their impact on the country"¹⁶ and that those built in the twenties "had very much less effect on economic development, for although they immediately handled a large volume of traffic, much of this was merely diverted from the lake services."¹⁷ His assessment of the contribution in Tanganyika is not much brighter.¹⁸ There, the 93 mile extension to Kinyami was torn up before the Second World War, as uneconomic, and the Moshi-Arusha extension was intended for settler development, which never really became significant. In this respect, it is important to note the appearance of competition from a new and more flexible mode of transport - motor lorries - on certain sections of the Gold Coast system during the twenties. Further research is needed to ascertain whether duplication of transport facilities or other exogenous factors were responsible for the diminishing returns in African railway investment from the 1920's. All that can be said at present is that compared to Asia and Latin America, Africa was a late comer on the railway scene, and this meant that the period in which railways could be said to have been indispensable in the African economy was shorter - barely two decades.

Whatever the differences in timing or rail densities per sq. mile, railway building in most parts of the periphery of the international economy, as in Africa, made their most dramatic contributions in terms

of market widening effects while establishing little direct linkages with local production. "India", Thorner noted, "alone of the countries with great railway networks is unindustrialised."¹⁹ While acknowledging the role of the railways in the elimination of inter-regional price differences and the promotion of external trade, he nevertheless argued that there was a noticeable lack of backward linkages with the Indian economy, - blaming the British for orienting the transport system towards the satisfaction of metropolitan needs rather than those of India.²⁰ A parallel case is that of the Malayan railways, where Kaur found that backward linkages were also negligible, and that benefits from the cheapening of transport costs accrued disproportionately to the export sector.²¹ In this respect it is also important to note that the pattern of railway development in the Gold Coast itself was to a large extent, influenced by the Malayan model of railway development put forward by Governors Maxwell, and Rodger, formerly long-serving Officials in the Straits Settlements. (see Chapters 2 & 3). The Mexican case, one of the few Third World railways to attract the Fogelian approach of "social savings", provides a further point of comparison. Coatsworth found that savings on freight operations were higher than in the advanced industrial nations and that they accounted for more than half of the increase in the productivity of the Mexican economy before 1910. However, he also found backward linkages to be weak, foreign exchange costs high, and institutional effects rather negative.²²

Three major conclusions thus emerge about the connection between railway construction and economic development in the less developed economies of Africa, Asia and Latin America:-

- 1) Gains accruing from the provision of transport services were generally higher than in the advanced industrial economies.
- 2) Backward linkages and spin off effects to local production were negligible and instead railway investment tended to reinforce existing technological and financial dependence on the advanced industrial nations.
- 3) The pattern of railway development and its accompanying social and welfare investments were heavily biased in favour of external trade and urban development, while the rural communities remained relatively underdeveloped.

What then are the lessons for tropical Africa in particular, where head loading remains even today the only medium of transport not only for such food crops as cassava, maize, plantain and wood fuel for local consumption, but even for the conveyance of the most valuable export commodities of coffee, cocoa, and palm oil from the harvesting point to the nearest road transport or railway station? The evidence suggests the need for a locally evolved, or a consciously borrowed and imitated, simple mode of transport, such as wheeled carts, to serve the African rural land mass, particularly small scale agriculture. In this case, not only would backward linkages from such an unsophisticated technology accrue directly to the indigenous economies, in the form of road building, wood-works, tyre production, and skills for construction and maintenance, but as providers of transport services, such a technology would carry a second transport "revolution" further to the doorsteps of the African rural communities.

This thesis has examined three aspects of railway development in the Gold Coast: 1) the origins and causes of railways,

2) railways as commercial or business enterprise; and 3) railways as providers of transport services. It argues that in the Gold Coast, as in many parts of Colonial Africa and the Third World, railway projects were designed primarily to facilitate production for metropolitan and world markets. Benefits from backward linkages were negligible, and nowhere in the less developed economies did railways prove to be a leading sector. But gains from cheapening transportation costs were dramatic enough to make railways probably the most important single factor contributing to economic development in most parts of the periphery. But the patterns of the railway development nevertheless tended to reinforce production for external markets, rather than internal, and the creation of regional economic inequalities and income disparities.

The thesis thus suggests the need for a simple mode of transportation that would provide both significant backward linkages to local production, and at the same time increase productivity on the land.

NOTES TO CONCLUSION

1. A. Fishlow, American Railroads and the Transformation of the Ante-Bellum Economy, (Cambridge, 1965), 303.
2. R.W. Fogel, Railroads and American Economic Growth (Baltimore, 1964), 234-35.
3. G.R. Hawke, Railways and Economic Growth in England and Wales 1840-1870, (Oxford, 1970), 410.
4. R.A. Church, The Great Victorian Boom 1850-1873 (Basingstoke, 1975), 31.
5. P. O'Brien, The New Economic History of Railways, (London, 1977), 27-28.
6. T.R. Gourvish, Railways and the British Economy 1830-1914, (Basingstoke, 1980), 38.
7. J. M. Clark, "Common and Disparate Elements in National Growth and Decline", Problems in the Study of Economic Growth, (National Bureau of Economic Research, July 1949), 30. Quoted in M. Abramovitz "The Economic Characteristics of Railroads and the Problem of Economic Development", Far Eastern Quarterly, 14(1954-55), 169-178.
8. See M.C. Reed (ed.), Railways in the Victorian Economy, Studies in Finance and Economic Growth, (Devon, 1969); Gourvish, Railways and British Economy; and P. O'Brien (ed.), Railways and the Economic Development of Western Europe 1830-1914, (London, 1983).
9. B.R. Mitchell, "The Coming of the Railway and United Kingdom Economic Growth", in Reed (ed.), Railways in Victorian Economy, 14.
10. Ibid.
11. See M.F. Hill, Permanent Way, the Story of the Kenya and Uganda Railways, 2 Vols, (London, 1952); E.B. D'Erlanger, The History or the Construction of the Rhodesian Transport System, (London, 1938); J. D'Almada, An Historical Outline of the Benguela Railway (London, 1951); S.E. Katzenellenbogen, Railways and the Copper Mines of Katanga, (London, 1973); C.A.H. Cosby, "A History of Nyasaland Railways, 1895-1935. A Study in Colonial Economic Development" Unpublished PhD Thesis, (Syracuse University, 1974); and O. Omosini, "Railway Projects and British Attitudes towards the Development of West Africa, 1872-1903", Journal of the Historical Society of Nigeria, 5 (1971), 491-507.

12. See L.H. Gann and P. Duignan (eds.), Colonialism in Africa, 1870-1960, (Cambridge, 1969), 109; Roland Oliver and Anthony Atmore, Africa Since 1800, (Cambridge, 1967), 144-45; J.F. Munro, Africa and the International Economy, 1800-1960, (London, 1976), 92-95 and Britain in Tropical Africa 1880-1960, Economic Relations and Impacts, (London, 1984), 32.
- 13.. Munro, Africa and International Economy, 94.
14. See Sir Edward Grigg's Preface to Hill's Permanent Way.
15. Michael Crowder, West Africa Under Colonial Rule, (Evanston, 1968), 273.
16. A.M. O'Connor, Railways and Development in Uganda, (Nairobi, 1965), 47.
17. Ibid., 49.
18. Ibid., 139-40
19. Daniel Thorner, "The Pattern of Railway Development in India", Far Eastern Quarterly, 14 (1954-55), 201-216
20. Ibid., also see John M. Hurd, "Railways' in Dharma Kumar (ed), The Cambridge Economic History of India, Vol. 2: C1757-1970, (London, 1983).
21. A. Kaur, "The Impact of Railroads on the Malayan Economy, 1874-1941", Journal of Asian Studies, 39 (1979-80), 693-710.
22. J.H. Coatsworth, "Indispensable Railways in a Backward Economy: The Case of Mexico", Journal of Economic History, XXXIX (1979), 939-959.

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