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Modern Inland Transport and the European Trading Firms in Colonial West Africa

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MODERN INLAND TRANSPORT AND THE EUROPEAN TRADING FIRMS IN
COLONIAL WEST AFRICA

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African Studies Centre, Leiden, the Netherlands.

1980

Table of Contents

Introduction	1
1. Modern transport and the advance of the firms	2
2. The river-based advance	3
3. The rail-based advance	8
4. The road-based advance	10
5. The typical river firm	12
6. The typical railway firm	14
7. The typical road firm	18
8. The halting frontier of the European firms	19
9. The intermediaries and the firms	22
10. Concluding remarks	26
Notes	29

Recently there has been a renewed interest in the large European trading companies which operated in West Africa during the colonial period. Sir Frederick Pedler wrote about the United Africa Company and its "principal predecessor firms", (1) Catherine Coquery-Vidrovitch about CFAO and SCOA, (2) Colin Newbury about the Niger Company, (3) and Régis Robin about Peyrissac. (4) These studies of individual firms are a welcome addition to the work of authors who dealt with the firms in general. Sir Keith Hancock portrayed them as the dynamic element of European expansion in West Africa, (5) John Mars analysed their cost structure, (6) Jean Dresch presented them as the chief investors in the inter-way trade, (7) and Peter Bauer dealt with their market strategy. (8) More recently Anthony Hopkins discussed the effect of the business cycle on their investments and operations (9) and assessed their role in European imperialism. (10) In my own study on the Lebanese in Sierra Leone (11) I discussed the policies of the firms in as far as they affected other traders.

The modernization of transport has been a powerful factor in economic development in many parts of the world. In West Africa it began towards the end of the 19th century. There is a general consensus that modern transport, by permitting long-haul trade in bulky produce, led to an expansion of production and trade in this region. (12) There is little doubt that the firms (as well as other traders) benefited from the new and cheaper transport. These macro-economic effects are, however, not discussed here, they are simply taken for granted. In this paper I have a different objective; I want to investigate the direct effects of modern transport on the firms, namely on:

- a. their advance into the interior (sections 1 - 4)
- b. their structure and organization (sections 5 - 7)
- c. their withdrawal from the interior in the 1950's and 1960's (sections 8 and 9)

1. Modern transport and the advance of the firms

Modern transport was a European introduction into West Africa. The new means of transport were European-designed and constructed, and also, at least in the early decades, European-owned and controlled. There was a conspicuous difference between modern European and existing African transport. (This dichotomy was blurred in the 1920's when significant numbers of Africans and Lebanese bought lorries and launches. We return to this later.) African transport was partly replaced by European transport but in many places it continued to play a role, normally in what was called the early stages of collection. In fact, it is useful to distinguish an Outer Zone with African transport and an Inner Zone with European transport and to call the boundary between the two the "European" frontier. During most of the 19th century this frontier was on the coast. Then, with the introduction of modern transport, the European firms advanced inland and the Inner Zone expanded rapidly. (13)

The term advance reminds us of military operations but there is a curious difference with regard to logistics. While the rate of advance of an army depends on the ability of the quartermasters to send supplies up, the advance of the firms was restricted by the opportunities to send supplies back. Much of the firms' thinking about this matter was condensed in the term "produce evacuation". In general the firms did not want to buy and store produce unless it could be carried back by European transport. Going farther up-country meant that they would have to rely on African transporters, a possibility which they seem to have rejected out of hand. This attitude determined the location of their produce buying stations up-country. Virtually all of them were built along navigable waterways, railways, or motor roads. (14) These buying stations (or trading posts, or factories, or factoreries in French) demarcated the European frontier, (15) which was a transportation as well as a trading frontier. I may add that it must not be confused with the frontier of the two-way trade, i.e. the far frontier of the Outer Zone.

Many years ago Hancock pointed out that the European firms made use of three forms of transport: river, rail, and road. (16) From the macro-economic point of view there is no need to elaborate this distinction but in this paper it will be used repeatedly. Its significance was brought home to me by a related distinction which the employees of the

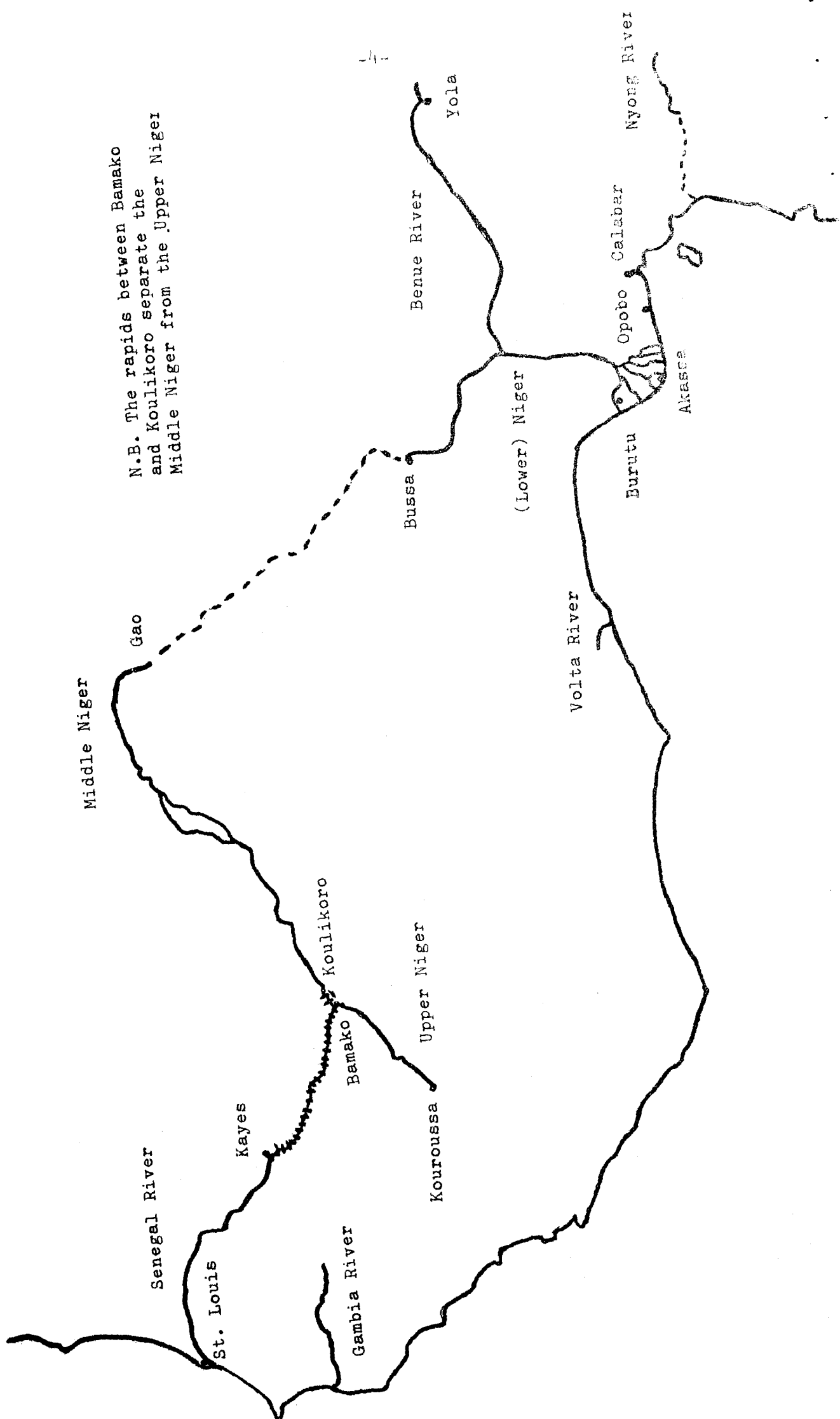
Firms often used in conversation. When they talked about the buying stations of their firm, they distinguished river stations, line stations (i.e., along the railway), and road or outstations. At first I thought that this referred merely to location but later I understood that it derived from the method of produce evacuation. A river station was designed and built to rely on water transport; a line station, often with a separate railway siding, depended on rail transport; and a road station on evacuation by lorry.

It is therefore desirable to distinguish three types of advance of the firms: a river-based, a railway-based and a road-based one. Each of these will be discussed in turn in the next three sections. Since the new means of transport did not become available at the same time we can also recognize three different phases of advance: the river-based advance started around 1880, the railway-based one soon after 1900, and the road-based one in the 1920's. Since conditions in West Africa varied from country to country, the years given here should be seen as a rough indication only.

2. The river-based advance

In the course of the 19th century inland navigation of the European type was introduced on the West African rivers. European firms and governments began to send vessels to West Africa in order to employ them there permanently. In this section I want to trace this new development. I note at once that this is more difficult for West Africa than for East Africa, where the start of European inland navigation was spectacular because the first European vessels had to be carried in sections overland before they could be launched on the lakes. And the same was true for the Congo. Some West African waterways resemble the East African Lakes because they are also cut off from the sea. On these the beginning of European navigation is properly recorded. On the Middle and Upper Niger it began in 1884 (see below) and on the Nyong in South Cameroun in 1906. (17) But most of the West African rivers stood in open connection with the sea, which makes it difficult to distinguish inland from sea navigation.

Since none of them used this distinction, the books I consulted could help me only indirectly, namely by their references to vessels. Apparently, there were many "steamers", but this term referred to oceangoing ships as well as large river vessels. Technically, there were



N.B. The rapids between Bamako and Koulikoro separate the Middle Niger from the Upper Niger

three categories of steamer: some were propelled by screws, some by side paddles, and some by paddles (or wheels) at the stern. The vessels of the last category, i.e. sternwheelers and quarter-wheelers, were not sea-worthy. They were good examples of vessels that were permanently stationed in Africa. Other examples were the barges. Unfortunately, none of my sources indicated when these vessels made their first appearance in West Africa. (18) It seems that the composition of the river fleets gradually changed in the early period: the number of ocean-going ships decreased and the number of river vessels, i.e. vessels that were not seaworthy, increased. This trend was fostered by developments in steam ship design which favoured the construction of larger ships. As these were too big for the West African rivers, the separation of sea and inland navigation became complete. (19)

Another consequence of the creation of river fleets was the emergence of entrepôt ports at the mouths of the rivers. On most rivers existing ports assumed this new function but on the Niger a new port, Akassa, was established in the late 1870's. (20) It served as a base for European navigation on the river and contributed to the decline of the island of Fernando Po, which had served as a kind of bridge-head and entrepôt for earlier expeditions on the Niger.

I suggested in section 1 that the river-based advance of the firms started around 1880. Indeed, I think that European inland navigation on the open rivers of West Africa began at that time. Below I review five areas for which the evidence points in this direction.

We may start with the Niger and the Benue in Nigeria, two waterways which, for half a century, were dominated by one company, successively known as the United African Company (1879-1882), the National African Company (1882-1886), the Royal Niger Company (1886-1899), and the Niger Company (1900-1929). It was formed in 1879 as an amalgamation of four British firms which had traded on these rivers for several years. At about the same time a French company, the Compagnie française de l'Afrique équatoriale (CFAE) was formed, also for the purpose of trading on the Niger and Benue. (21) Apparently, it invested a great deal because by the end of 1882 it was equal, if not superior in strength to the National African Company, as the British firm was then called. (22) The latter was drastically reorganized in 1882 and was able to double the number of its steamers

and buying stations in the following year. (23) CFAE was unable or unwilling to match this effort and gave up in 1884, selling its assets to the NAC. (24) Thus, a commercial monopoly emerged which has received much critical attention in the literature, too much attention perhaps. A re-examination of the sources is desirable, in which more attention should be given to transport technology, logistics, and the actual investments of the British and French businessmen.

The river Senegal acquired a new significance in 1879, when the French government declared its support for the Senegal-Niger railway. The French envisaged an enormous transportation axis into the heart of West Africa, which entirely relied on "European" transport: navigation on the Senegal from Saint Louis to Kayes; a railway from Kayes to the Niger; and inland navigation on the Middle Niger. The French must have been confident about the possibilities for European navigation on this river; otherwise the decision to build a railway made little sense. Construction began in 1881 (25) but progress was slow. To strengthen their claim on the Middle Niger the French decided to launch a vessel on the river before the railway was completed. For this purpose they organized an expedition which carried a launch in parts from Kayes to Bamako. In August 1884 this vessel made its maiden voyage on the Niger. (26) A second launch was transported in the same way in 1888. (27) Although these were military vessels, they indirectly served a commercial purpose because they confirmed the navigational possibilities of the Niger. The advance to the Niger boosted navigation on the Senegal, which, interestingly enough, remained a mixture of sea and inland navigation. In the short high-water season ocean-going ships ascended the river to Kayes but there was also a proper river fleet which operated from Saint Louis and belonged to the Compagnie des Messageries Africaines. It was supplemented on the upper river by two government-owned sternwheelers. (28)

In the Gambia the leading British firm, the River Gambia Trading Company, bought a river steamer and a steam launch in 1882. (29) It was this firm which had started buying groundnuts on the upper river three years before, after local wars had kept European traders away for a long time. (30) The new steamer was expected to speed up groundnut evacuation, enabling the firm to take the lead over its French rivals. (31)

In the Niger Delta and adjacent areas Miller Brothers established a great many trading posts in the 1880's and early 1890's. Much is

known about the conflict in which Miller Bros. was forced to give up these posts in 1893 (32) but practically nothing about the way in which they were established. It is likely, however, that the firm used its own vessels to carry produce from these buying stations to the export harbours at Opobo and Calabar. Perhaps none of Miller Bros.' stations was farther from the sea than a hundred miles. Yet logistically it was an advance inland. Further research is needed to show when this advance began and on what vessels it depended.

In Ghana the Volta offered opportunities for inland navigation between Ada on the coast and Akuse up-stream. In 1891 there were some launches operating on this part of the River. (33) According to Pedler they belonged to the firm of Swanzy. (34)

There was an echo of these developments at the Berlin Conference of 1884-5. Navigation was one of the points on the agenda, and two rivers, the Niger and the Congo, were mentioned by name; the Senegal was deliberately omitted. (35) Historians have described the negotiations about the freedom of navigation on these rivers -- a freedom which was accepted in theory but denied in practice. (36) It is significant that much time and effort was spent on this topic. Apparently, many people felt that the prospects of European navigation in Africa were rosy. But why were these prospects so good? Or so much better than ten or twenty years earlier? If the explanation had been technical, it would probably have been mentioned in the literature. (37) From the absence of such references I conclude that the explanation must be mainly psychological. There was a change of mood among the investors. And presumably the optimism was infectious.

The prospects of European navigation largely determined the shape of colonies such as Nigeria, Gambia, and Senegal (in its pre-1903 boundaries). We might call these territories river colonies because the early commercial and administrative policies of the Europeans were geared to the navigable water-ways. The French Soudan (now Mali) was another river colony. Commercial development in this territory was slow until the completion of the Kayes-Niger railway in 1904. (38) The trading firms rapidly invested in river vessels in the following years. By 1910 they owned 700 tons on the Upper Niger and nearly 600 tons on the Middle Niger. (39) It is interesting to remember that this country, which is now considered underprivileged because of its landlocked position, once

run it facilitated the unloading of railway materials and in the long run it lowered handling charges on the exports which the railway generated. In general these better harbours also had superior communications with Europe: the mail steamers called regularly and the under-sea telegraph cable could be used for urgent messages. As a result these ports were also preferred as a place of residence by the colonial governments. Only the Sekondi-Kumasi line (see table 1) did not originate in a colonial capital.

These four factors: a good harbour, the mail boat, the telegraph cable to Europe, and proximity to the colonial administration, made these towns excellent bridgeheads for the commercial advance into the interior. At the same time, where one or two of these factors were missing, like in Sekondi, the firms were handicapped. This may explain why they were slow to move inland in the Gold Coast. (42)

Having sketched the circumstances we should now try to document the actual advance of the firms. Unfortunately, there is very little specific information. There are a few useful regional studies, such as that on Kano, where the advent of the firms is given in detail, including the competition for superior sites close to the railway station. (43) Yet a fairly complete reconstruction of the advance seems possible. First, there are the reports and archives of the big firms. (44) I guess that about half the desired information can be found there, but, of course, data on unincorporated enterprise and firms that failed long ago, will be missed in this way. Secondly, in most countries land rights were registered by the colonial administration. From these registers we can learn which firms obtained land in the rail towns. Such a study on Sierra Leone is now in course of preparation. (45) Thirdly, one can search contemporary periodicals for news, possibly in the form of advertisements. The search can be limited to a few years following the opening of the various railway stations. Finally, one can visit the railway towns to see how many buying stations are still there. Photographs and the memories of elderly inhabitants may yield information on the buildings that have been demolished.

My own observations in the railway towns of Sierra Leone in 1970 suggest that all buying stations had been made from imported building materials: sawn timber, corrugated iron sheets, and cement for the floor. Since these materials were presumably carried by rail, construction

must have taken place after the railway had been opened to traffic. The construction techniques were sound because many buildings weathered the storms for sixty years. My impression was also that the buildings were rather large. Presumably the firms were optimistic about the volume of trade. Another remarkable feature is the height of these buildings. I understand that a high roof enhanced ventilation and helped to dry produce. On the whole the firms took the investment in line stations seriously.

Some further observations must be made here, although they may not apply to all railway lines. The firms assessed the produce potential of an area before they decided to build. If it was low, they shied away from the area. It was possible therefore to find railway towns (or even a string of them) without a single buying station. But in some promising towns one could find a dozen firms represented. For the big firms it was a matter of policy to open a station in every promising town. The majority of firms, however, could not afford such a comprehensive network.

4. The road-based advance

The third significant representative of modern inland transport in West Africa was the lorry. The teething troubles of the early models made them unattractive for private owners; indeed, public ownership was the rule before 1914. The railways in Nigeria for instance established a motor transport service in 1907, which was intended to increase rail traffic. (46)

A better and lighter type of lorry, developed by the Ford Company in the 1910's, reached West Africa soon after World War I. As private enterprise was quick to appreciate the advantages of the new models, most of the lorries put on the roads in the 1920's were privately owned. When the British and French rulers realized the value of the new lorries, they switched over from rail to road construction, although several pre-war rail projects were still continued. (47) Since roads, complete with bridges and ferries, took time to build, the decisive advance of the lorry in trade did not occur before the mid-1920's. (48)

The traders -- not only the European firms, as we shall see later -- responded to the motorable roads by establishing trading posts along them. This formed the road-based advance. We must distinguish an early advance, based on government lorries, from a later advance based on privately-

owned lorries. The small pre-1914 advance will be passed over here so as to concentrate on the major advance of the 1920's. There is no doubt that this advance was successful in stimulating the produce trade because produce exports continued to increase. But details on the advance are hard to obtain. And the chances for a fairly complete historical reconstruction are much poorer than with the rail-based advance.

Fortunately we may deduce some features of the road-based advance from the geography of the new motor roads. In general they were short, isolated stretches of road, which originated in a rail or river town. This starting point was important for two reasons. First, it made it easier for the P.W.D. engineers to begin construction. (The analogy with the harbours and railway construction is obvious). Secondly, it was in these towns that a lorry was unloaded from the train (or a steamer) in order to start its operations on the new road. Normally a lorry would stay on "its" road until it was beyond repair. (49) The new roads were conceived as additions to the existing rail (or river) transport system. In keeping with the European preoccupation with produce evacuation, they were called feeder roads because they were intended to feed more produce to the railways (or the river fleets). (50) Many roads were built at right angles to the railway line (or the main course of the river). This was the most promising way to reach areas which until then had not participated in trade.

When a firm decided to establish one or more road stations along a new feeder road, the station manager in the town where the road began was normally responsible for the execution of this plan. He also became the boss of the men who were put in charge at the new road stations, which were often seen as satellite stations. This hierarchy -- also reflected in produce bulking -- led to the use of the term outstation.

Northern Nigeria was an area in which the firms established many road stations. Pedler speaks of a "massive invasion" of the African & Eastern Trade Corporation in this area soon after its formation in 1919. (51) He also describes the way the Gottschalck men constructed road stations. (52) When UAC was formed in 1929 it was in possession of about eighty outstations in this area. (53) It should be remembered that Northern Nigeria was part of the Sudanic belt, where the new lorries could use existing tracks, which had been made for people and pack animals.

5. The typical river firm

In this section we define a river firm as a trading firm which relies exclusively on water transport for the evacuation of its produce and which uses its own vessels to effect the evacuation. The Royal Niger Company and the River Gambia Trading Co, two firms which we encountered in section 2, were such river firms but they did not remain so for long. When the Niger Company began to use lorries in Northern Nigeria, (54) it ceased to fit our definition. It was further common for a firm to be a river firm in one colony and a railway firm in another one. CFAO for instance was a river firm in the French Soudan but a railway firm in the Gold Coast.

It may be objected that a river firm as defined here is merely an analytical construction. This is true indeed for most periods and for most firms but such a construction may nevertheless prove helpful to understand the history and operations of the real firms, as I hope to show in this and the following sections. Below I want to make a number of observations on such a fictitious river firm. Afterwards I hope to relate these to the experiences of the real firms.

A river firm needed a great many assets. First, there were the vessels (steamers, launches, tug boats, barges, etc.). **Secondly**, there were ancillary facilities such as fuel dumps (with wood, coal, petrol, or diesel oil) and repair and maintenance yards. Thirdly, there had to be warehouses and loading and unloading equipment at the seaside end of the river. If there was much traffic, a complete entrepôt port developed. Most of these were on the coast (at Saint Louis, Bathurst, Akassa and Burutu) but some were in the interior (at Bamako, Koulikoro and, outside West Africa, at Leopoldville and Kisumu). Fourthly, buying stations had to be established along the rivers; some of these required wharves and jetties.

These assets required the investment of large sums of money, which were irrevocably committed because most of these assets could not be removed and taken back to Europe. Even the steamers were not so movable as they seemed at first sight. This was especially true, if they had been designed to cope with the problems of a particular water-way. Such vessels could not be used elsewhere. An investor had to be quite convinced before he poured his money into a fleet of river vessels somewhere in Africa. On the other hand, having built up a river firm an investor was extremely reluctant to reduce or abandon it.

The personnel of a river firm consisted of the crews, the men in the buying stations, and those in the entrepôt port. Normally, the headquarters were located in the entrepôt port, thus concentrating many employees in one town. The directors had to take many decisions with regard to their personnel. What kind of people should they recruit for the fleet and the stations? If they wanted Africans, did they take local men or strangers? How many Europeans were needed on each vessel and in each station? Could Africans be put in charge of some vessels and stations? The selection of station managers was a special problem because they had to work independently as they could not readily contact their boss. At the same time a general manager wanted to retain overall control by giving them detailed instructions before they assumed duties. Messages from the general manager to the station manager and vice-versa were carried by the firm's vessels. This assured regularity, while in emergencies vessels could be diverted to carry a message. On some rivers, such as the Benue and the upper Senegal, navigation was impossible for part of the year. The station managers along these rivers were cut off for many months. It was in the interest of the firm to send steady, experienced and loyal employees to these places.

The period without navigation also complicated the evacuation of produce. It was particularly unfavourable if the low-water season occurred just after the harvest season because in that case the station manager could not despatch the quantities he had bought until several months later. He needed a large store, and the firm needed additional capital to finance such immobilized stocks. It is clear that a river firm needed a great deal of working capital. If a firm kept its fleet small, it was bound to use a lot of working capital to finance stocks up-river. On the other hand, if it speeded up evacuation in order to save working capital, it needed more vessels. And the optimum solution for this exercise depended on a fluctuating produce price! We must remember that two groups of people were involved in this exercise: the directors in Europe and the general manager in Africa. I expect that the latter was more concerned about fixed capital and its deployment and the former about working capital, bank loans, and liquidity. Frequent contact between the two groups by letter and cable was essential in order to have a consistent policy.

How does this picture of a fictitious river firm compare with

the historical evidence? Let us first take the Royal Niger Company, a river firm, about which a fair amount has been published. Flint and Pearson provide information on the finances of the R.N.C. but note that the company operated two accounts, a trading and an administrative one, and they warn that the directors had every reason to debit expenses against the administrative account, which reduces the reliability of the figures. (55) Pedler discusses the personnel policies of the R.N.C.; they employed many Africans in responsible positions, (56) they put great emphasis on loyalty and trust, and abstained from strict control. (57) Pedler also discusses the produce evacuation programme (58) but does not mention the absorption of working capital in stocks up-river. (59)

What I found lacking in the published accounts is the matter of internal communication. How were messages sent from London to Akassa before 1889. (60) How important was Bonny after it was connected by cable to England in 1889. (61) How were messages sent from Bonny to Akassa and from Bonny to the headquarters at Abutshi? And between Akassa and Abutshi? And how was this wide-spread organization in the interior kept together, and efficiency maintained? (62)

River transport on the Gambia River was characterized by free competition. Quite a number of firms participated: in 1960 there were still seven. (63) It is interesting that in this area the firms were prepared to use sailing vessels. (64)

There is reason to expect a different type of river firm in the French colonies. Some firms, as we have seen, used ocean carriers to collect export consignments of produce at Kayes; (65) they did not have to invest in a river fleet and could send their ships to other parts of the globe in the ten-months' period in which they could not be used on the Senegal. Other firms -- small ones in general -- relied on public carriers for the evacuation of their produce. We have seen that the Compagnie des Messageries Africaines operated on the Senegal in 1910. In the inter-war period it was replaced by the Société des Messageries du Sénégal, also a public carrier. On the Middle Niger the Société des Messageries Africaines, established in about 1910, provided services to the public. (66)

6. The typical railway firm

A railway firm may be defined as a firm which relies exclusively on rail transport for the evacuation of its produce from a particular

territory. A railway firm, unlike a river firm, did not have to invest in means of transport. In general, the railway firms therefore needed less capital for a given volume of produce trade than the river firms. Economic theory suggests that more new entrants may be expected in such a situation. It is important to distinguish new entrants who were completely new to Africa from those who had operated in West Africa before but were nevertheless new to a particular territory. Such "lateral expansion" along the coast accounted for many "new" railway firms.

Since it was impossible to operate a railway efficiently without a telegraph, the colonial governments equipped the new railway lines with a telegraph system. In nearly all colonies this system was opened to the public. (67) This created ideal circumstances for internal communication in the firms. A general manager could easily send brief messages to his station managers and the latter could reply at once. Changes in buying prices could be passed on without delay. Moreover, with up-to-date knowledge of up-line stocks and purchases a general manager could improve his exportation programme.

It is probable that superior communication influenced the recruitment of personnel. It was no longer necessary to have experienced men as station managers. Even a newly arrived young man could be put in charge. If he ran into trouble, he could cable his boss for instructions. Or a senior man could be sent up to help him. It must be remembered that the health situation of Europeans improved greatly in this period. Prior to this employers preferred men with African experience, not only because of their knowledge but also because they had shown a certain resistance to tropical diseases. After about 1900 the firms' reluctance to employ a newly arrived European became less. And, of course, more and better candidates were willing to go out. Not only was the overall risk less but an employee of a railway firm had a better chance to get proper medical care. If he fell ill, he could be put on the train and travel in comfort to a hospital. All these changes probably led to a process of "europeanization" in the railway firms in the period before 1914.

As the railways operated regardless of the seasons, the managers of the line stations could rail produce to the export harbour regularly and frequently. The general managers did not have to worry therefore about stocks up-country, unless a big harvest exceeded the capacity of the railway. It seems likely that the railway firms made full use of

the opportunities for rapid produce evacuation. (68) In this way they had to finance their up-country purchases for a shorter period, which meant that they could use their working capital several times in succession during a buying season, with favourable effects on annual profits.

How much evidence is there to confirm the suggestions just made? I noted several instances of lateral expansion in the years before World War I. Two firms from Sierra Leone moved to Lagos: Paterson Zochonis in 1898 (69) and G.B. Ollivant in 1900. (70) But there were also "Nigerian" firms which moved westwards: Lever Bros., until then operating in the Lagos area only, entered Sierra Leone in 1912 (71) and the African Association did the same in 1914. (72) Elsewhere CFAO moved south and east along the coast. (73)

I have suggested that railway firms were more efficient than river firms and that they required less investment and carried fewer risks. If this is so, did the firms show a marked preference for rail operations? Here again I found some evidence in Sierra Leone. G.B. Ollivant, practically a new firm after the Chadwick family took over in 1902, invested along the railway but kept away from the Sherbro area, although the older firms possessed many river stations in that area; five other new firms did the same. (74) More interesting than Sierra Leone are Nigeria and Senegal because in these colonies new railways replaced the existing river transport systems to a large extent. (75) When the line from Dakar reached Kayes in 1923, the produce from the French Soudan was diverted from the Senegal River to the new railway. The diversion saved the firms working capital because the Soudan produce used to arrive in Kayes after October. (76) Before 1923 it had to lie in storage until the following August, when the ocean carriers could ascend the Senegal River. After 1923 it could be railed through to Dakar or Kaolack. (77) The significance of Kayes as an entrepôt town disappeared almost completely, and the capital invested there in warehouses had to be written off by the firms.

In Nigeria rail and river began to compete in 1912, when the line from Lagos to Kano was opened to traffic. In this competition the trade of Northern Nigeria was at stake. Several Lagos firms established buying stations in the north to profit from the unexpected groundnut boom. (78) Fortunately for the Niger Company, until then the unchallenged commercial leader of the north, mainly smaller firms moved up, whereas two big ones, Miller Bros and the African Association, were prepared to wait because

of a pooling agreement with the Niger Company. But as these two firms felt that the Niger Company was not active enough in Northern Nigeria, they broke the pool in 1917 and began to establish their own buying stations in the north. (79) It is necessary to point out that these two firms, although long established in Nigeria, had moved to Lagos only recently, Miller Bros. in 1903 and the African Association in 1907. (80) By this move they had become railway firms. In the light of the analysis above it is clear that the Niger Company as a Delta-based river firm was seriously handicapped in its struggle against the Lagos-based railway firms. The directors presumably realized that they could never operate as efficiently as the railway firms. At the same time they could not give up their principal investment, the river fleet. (81) It must have been a great relief for them when a buyer appeared on the scene. The story of the take-over by Lever Bros. in 1920 is well-known, as well as the fact that it was a poor bargain for Lever. (82) After the take-over the headquarters of the Niger Company were moved from Burutu to Lagos; (83) the river port gave way to the railway port.

To be fair we must add that the preference for the railway was neither general nor permanent. When produce prices were very low, as they were in the 1930's, the firms turned again to evacuation by water, for instance in the Sherbro area in Sierra Leone. (84) Again, the removal of price risks by the government seems to have revived interest in water transport: UAC re-invested a great deal of money in its Niger fleet in the late 1940's. (85)

Not much has been published about the recruitment policies of the early railway firms. If the number of European employees increased, as I suggested above, it may not have attracted attention because there was a similar trend in the colonial administrations. A retired employee of UAC told me once that many station managers in Sierra Leone in the 1920's were in fact Europeans. (86)

The immediate effect of the railway and the telegraph on the organization of the railway firms is hard to document. Pedler tells us about the accounting systems introduced in MacIver between 1910 and 1920 and afterwards applied to the Niger Company. (87) They represented a great improvement and were probably inspired by Lever Bros., the industrial parent company. But MacIver may not have been so much ahead of the other railway firms. In fact, there are many suggestions that paper-work multi-

plied in the firms in the inter-war period. There was a tendency towards bureaucracy and centralization, which greatly impressed John Mars, when he visited Nigeria in the late 1930's. (88) At that time the general managers in Africa resented the strict control which their directors exercised over them. (89) But, of course, there must have been an earlier phase in which the general managers themselves increased their powers over the station managers.

The extent of centralization in the firms is well illustrated by the cocoa buying agreement of 1937. The signatories to the agreement undertook to work with identical price schedules, which could be adjusted from day to day. Decisions on price changes were taken in London (by one man!) and relayed by telegraph to the station managers in the Gold Coast and Nigeria. (90) I would like to suggest that river firms could never have achieved such centralization. Indeed, the image of the heavily centralized expatriate firm was strongly influenced by the railway firms.

7. The typical road firm

A road firm may be defined as a trading firm which employs only lorries for the evacuation of its produce. This definition excludes hybrid firms which combined road with rail or river transport in their evacuation programmes. It also excludes lorry-owning firms which carried produce to an up-country buying centre but not to an export harbour. Road firms emerged in the 1920's. They were not very numerous and most of them remained small.

Geographical factors were largely responsible for the stunted growth of the road firms. As we saw above most of the new roads were built as feeder roads to the railways or rivers and were therefore separated from the export harbour by a stretch of railway or river. This was a deliberate policy in most countries. (91) As a result road firms did not emerge in the big ports but in the small ones. We must remember that there had been a process of port concentration in West Africa in the period before World War I: the ports served by a navigable river or railway grew rapidly, while the others declined. (92) Some of these declining ports got a new lease of life in the 1920's, when roads were built in their immediate hinterland. When, moreover, shipping lines were willing to call it became worthwhile for traders to organize the export of produce from these ports. In southern Sierra Leone the ports of Sulima and Mano Salija experienced a revival in the late 1920's because the Woermann Line called regularly and

the government began to build roads. (93) Other ports, such as Cape Coast and Winneba in the Gold Coast, and Calabar in Nigeria, saw a similar turn in their fortunes when motor roads were built in these areas. (94) A revival of canoe transport often contributed to the growth of trade in these towns. But in general the reviving ports could count on a small hinterland only, because the rail and river ports had annexed most of the country as their hinterland. (95) The left-overs were for the road firms.

The owners of the road firms were mainly Africans and Lebanese but there were also a few Europeans who settled in the reviving ports and started an export firm. (96) None of these reached the size of the earlier firms. For this reason river and railway firms continued to dominate the commercial scene of West Africa.

8. The halting frontier of the European firms

The advance of the firms could not go on indefinitely, but when and where did it stop? Or, to use the terminology of Hancock and Hopkins, where and when did the traders' frontier come to a halt? Hancock is extremely vague about this question but he presumably believed that the frontier was still moving forward when he visited West Africa in 1938/39. I think that this was incorrect. Hopkins, referring to a wider group than Hancock's traders, states: "By the 1920's the frontiers of expatriate business had met in the interior of Africa." (97) I agree with the date but have my doubts about the geography of this statement.

Hopkins made his statement in an article which considers expatriate enterprise from the top. One could say that he adopted the director's view. (98) I imagine that the average director had a map of Africa in his office, whereas a general manager had a map of the territory in which he was responsible for the firm's operations. This reflected a difference in scale. I want to argue below that the attitude of the general managers towards the road-based advance was lukewarm and that therefore the frontier of the firms came to a halt during the period of motor road construction.

The frontier remains a vague concept unless it is related to activities or investments which can be plotted on a map. This turns our attention to the buying stations, which, more than anything else, demarcated the firms' frontier. What changes occurred with regard to buying stations? Some information is available on two large French firms. Considering the number of buying stations they possessed we may con-

clude that SCOA ceased to advance in 1924 and CFAO in 1930. (99) In Sierra Leone very few stations were built after 1930 (100) and their construction could normally be explained in terms of particular local requirements. (101) Research on other firms and countries is still needed but SCOA's example proves that the crisis of 1930 was not the only factor which brought the forward policy of the firms to an end, although this is often believed.

My own research in Sierra Leone shows that the participation of the firms in the road-based advance was minimal. (102) In an attempt to explain this I will argue that the general managers were reluctant to operate road stations and confident that they could do without them and nevertheless benefit from the new motor roads. This explanation can be applied to the firms everywhere in West Africa.

Road stations had several disadvantages for a railway firm. First, they could not be properly run unless the firm also owned lorries. And these assets brought a whole set of complications. How could proper maintenance and repair be provided? There were very few motor mechanics in Africa at the time, while the roads caused a lot of mechanical trouble. And who was to drive the lorries? The British firms seem to have felt that lorry driving was "below the dignity of the white man" and they never employed British drivers in Sierra Leone. (103) I assume that they adopted this policy for the whole of West Africa. (104) It is interesting that other firms thought differently about this: I have heard of French and Swiss lorry drivers in Sierra Leone in the inter-war period but I must add that these men were not employed by CFAO or SCOA. If a firm rejected the idea of European drivers, it had to find African drivers, of whom there were very few. The firms were hesitant to employ them, even if they were experienced, because a lot of responsibility had to be delegated to them, for instance in case of breakdowns and accidents. (105) It was also found that instructions not to carry passengers put African drivers in an awkward position. (106)

Poor communication was another problem of the road stations. We have seen that the telegraph was a boon for the railway firms, who found the road stations, which were not on the telegraph, a step backwards. Messages had to be sent by lorry or, if these broke down or if the roads were impassable, by runner. This reduced overall control by the general manager; if the buying price had to be changed, he could pass the new price on to the managers in the line stations within 24 hours but he could

only guess when the managers in the outstations would get the news. This was an unwelcome complication for a centralized firm. But the situation for the station manager was not ideal either. He felt isolated "in the bush". He had to take many decisions on his own and, if he fell ill, he had to travel in a shaking lorry to get proper medical care. I suspect that European employees disliked the idea of being posted to an outstation. The general manager could, and did, resort to African candidates (107) but, as with the drivers, I suspect a certain reluctance to appoint them at this level. All reasons to have as few outstations as possible.

But was it necessary for the firms to open road stations? If small independent traders were prepared to establish trading posts along the new motor roads, the volume of produce would rise and, with the feeder roads being cul-de-sac roads, all of it was bound to be offered for sale at the line stations of the firms. The general managers judged that the emergence of the intermediaries, as I propose to call these small traders, would save them the trouble of advancing along the motor roads; co-operation between the firms and the intermediaries seemed the ideal formula for increased trade. The general managers may have aimed at voluntary co-operation but, at the back of their minds, they knew that they could enforce their will, if necessary, because the geographical dependence of the feeder roads entailed the economic dependence of the intermediaries on the firms.

The considerations which I have attributed to the general managers are not easily verifiable but fortunately one feature of the inter-war produce trade is amply discussed in the literature. The firms supported the intermediaries with capital, not indiscriminately but on a contractual basis. If an intermediary signed a contract with a firm, he became a "tied" trader (or sous-traitant in French). To be tied to a well-known firm was a reason for pride. (108) A tied trader undertook to sell all his produce to "his" firm and to buy all his merchandise from it. The transport situation narrowed this down to a personal relation between the intermediary and the station manager of "his" firm in the railway town. The intermediary was willing to sign the contract because he obtained capital in this way: advances to buy produce, credit to buy merchandise and hire purchase terms, if the firm sold lorries. (109) The firm was willing to sign the contract because it prevented competition: tying created as many separate markets as there were firms represented in the railway town. Tying promised the

firms indirect but effective control over the produce of the feeder roads

The considerations above seem to provide a complete explanation of the halting traders' frontier. I suppose that the general managers advised the directors to go slow on investment in road stations and that the latter agreed but, of course, they may have reached this decision on completely different grounds. (The capital scarcity caused by the war and the losses suffered in the crisis of 1920 may have made them cautious with all new investment.) Further research may show which view was more important: the "European" view of the directors or the "African" view of the general managers. But whatever the explanation, the halting frontier of the trading firms had significant implications for the organization of the produce trade, as we shall see now.

9. The intermediaries and the firms

The intermediaries, who filled the vacuum when the firms did not advance along the new motor roads, were a mixed group. Africans predominated in the Gold Coast, Dahomey, and Nigeria. I assume that most of them came from elsewhere, that is, they were "stranger traders" and not local traders -- a difference which might easily escape the notice of European observers. Farther west, from Ivory Coast to Senegal, there were many Lebanese and a sprinkling of Europeans. (110) This social variety should not blind us to the economic homogeneity of the group. It is also necessary to distinguish the 19th century "middlemen" from the 20th century intermediaries. While the former had their base on the coast, the latter operated in the interior. Again, the former used indigenous modes of transport (caravans, canoes, and boats) but the latter used the imported lorry. Finally, the former had traded on equal terms with Europeans for many decades, while the latter developed from a position of dependence on them. Of course, some of the old middlemen or their sons may have become intermediaries but it remains useful nevertheless to make the distinction.

The intermediaries were successful, much more so than is generally recognized. If we try to measure their success in absolute terms, the depression of the 1930's tends to distort our findings. It is therefore more appropriate to measure in relative terms, for instance in relation to the firms. I have come to the conclusion that the intermediaries as a group were more successful than the firms in the inter-war period and that their growing economic strength became a matter of great concern

for the firms. I arrived at this conclusion on the basis of my research in Sierra Leone; later I found confirmation for my viewpoint in publications on other West African countries.

Before going into detail I would like to argue that the firms' decision not to advance along the motor roads was a mistake because in this way they created favourable conditions for potential rivals. If the firms had studied their own history, they would have recognized the danger. Why did they themselves decide on a forward policy in the period 1880-1930? Presumably because of the economic advantages. But then it was plausible that the intermediaries would benefit just as well from a forward policy. For, if in the past it had been advantageous to buy produce from hitherto isolated and commercially inexperienced farmers, the intermediaries were now meeting farmers in the same condition. In short, the non-European intermediaries were following the European example. It was probable that this would pay off.

Turning to actual developments we must first mention another aspect of produce evacuation. In the literature the typical pattern of evacuation has been compared with the drainage system of a river. (111) All water reached the sea at one point and any drop of water had a pre-determined route whereby it reached the sea. So also with produce: any parcel of produce had a pre-determined route along which it reached the export harbour. It was on this that the firms relied when they left the feeder roads to the intermediaries. But it proved a miscalculation, as we shall see now.

The early motor roads were built primarily for produce evacuation but, of course, they could be used by travellers as well. Most of these were Europeans, who knew how to present their views to the government. They complained about the cul-de-sac roads and asked for connecting roads to link the feeder roads to each other. These were built in due course. This change in road building policy meant that the old one-direction evacuation pattern was mutilated. Henceforth parcels of produce could be carried to the export harbour along more than one route. Apparently, alternative routes with more miles of road were preferred because the share of lorry transport increased. We know this because several colonial governments became concerned about the falling share of the railway. (112) The officials thought in terms of road-rail competition, which also occurred in Europe at that time. They wanted to restrict lorry traffic by taxation, licensing, and road tolls in order to preserve railway

revenue. (113)

It is facile, however, to analyze this problem simply in terms of transport competition. It should be seen in the context of the produce trade. (114) The intermediaries seem to have discovered that it was profitable to use alternative evacuation routes. Whereas formerly there had been only one town where they could offer their produce for sale, there were now two or more. It is unlikely that we can reconstruct the buying schedules of the firms for all their line and river stations. Only these schedules could show beyond doubt why produce was diverted. In the absence of such proof we simply assume that the intermediaries discovered some margins and made the most of it. The men who possessed their own lorry had the best chance to discover these margins but they could not keep their luck secret. Soon the flexibility of the lorry helped the great majority of the intermediaries to escape from the rigid one-direction evacuation pattern. Thus, the economic dependence on the firms disappeared to a large extent. (115)

In the cocoa areas of the Gold Coast the intermediaries found another way of getting the better of the firms. They began to keep an eye on the world market and discovered how to benefit from price changes. They held back cocoa in a rising market and delivered it in a falling market. (116) Since the firms were obliged by their own traditions to accept delivery at the time chosen by the seller (117) they could not avoid losses (at least if the intermediaries had correctly foreseen the direction in which prices were going). (118) The losses of the firms became disastrous in the 1930's. (119) Being forced into a defensive position the firms decided to join forces. In 1937 they signed a cocoa buying agreement with two significant elements. The first was the fixing of common buying prices and the consequent restriction of competition. This aroused a storm of protest in the Gold Coast and led to the downfall of the scheme. (120) The second element concerned the link between buying prices and world prices. The firms felt that changes in the latter should be reflected in Africa as soon as possible. A top employee in London was charged with studying the world market and changing the basic price when this seemed necessary. The new price was then cabled to Accra (and Lagos) and relayed to the station managers, who adjusted their buying prices at once. (121) (We mentioned this earlier as an example of extreme centralization). It was hoped that speed of communication would give the firms an advantage over the intermediaries when it

came to forecasting price trends. In this way "speculation" by the intermediaries could be prevented. This second element was never properly tested because of the early dissolution of the agreement.

I believe that the concept of countervailing power (122) is the appropriate one to describe the power of the intermediaries vis-a-vis the firms. The mere presence of the firms or rather the continuity to which they were committed by their material assets and goodwill, provided a stepping stone for these new-comers. While the firms formed a solid, stable element in the produce trade, with many long-established rules and practices, the intermediaries could change their policies over-night and often did so. In the eyes of the firms they were opportunistic and disloyal, always looking for the quickest way to profit from the umbrella provided by the firms without contributing to the cost. In retrospect we see that the power of the firms was greatly reduced in the 1930's, not because of new rivals at the export stage -- there were very few at the time -- but because of the countervailing power of the intermediaries in the early stages of the produce trade. They used their power to drive a better bargain on produce prices and to shift as many cost elements as possible to the firms.

The firms grew weaker in the inter-war period, not so much in the export harbour, where they appeared stronger than ever, but at the periphery up-country. Even there, however, they managed to maintain the frontier, the high-water mark of their advance, for some twenty-five years. (123) Then they began to withdraw from up-country. They either sold or let their buying stations to independent traders (124) and confined their operations to the ports and a few central towns up-country. As their turn-over did not fall, the firms saw nothing dramatic in their withdrawal. In historical perspective, however, it was a major change. The advance of the period 1880-1920 was followed by a retreat in the 1950's and 1960's. The withdrawal has often been explained by the emergence of the Marketing Boards (125) but I feel that the firms would also have withdrawn, if these organizations had never been established. Since the firms were no longer in direct contact with the farmers, the reason for the advance into the interior had disappeared. Again, a network of stations meant that a firm had to meet a large number of shrewd and experienced intermediaries at many points. Was it not better to shorten the lines and meet them at only a few points?

The withdrawal of the firms should finally be related to a change in transport. The number of lorries in West Africa increased quickly when post-war shortages came to an end. Moreover, the carrying capacity grew; in Sierra Leone three-ton lorries were in the majority in 1949 but five-ton lorries in 1955. (126) But more important was the change in road-building policy. Many governments embarked on the construction of trunk roads, which led to the capital city. (127) If this also happened to be the export harbour, produce could be lorried straight to the docks. (128) As lorries became more competitive, their share in the transport market increased at the expense of the railways and the river fleets. (129)

The new situation can be interpreted in terms of the analysis of section 1. Non-European transport (the lorries were mainly owned by Africans and Lebanese) grew at the expense of European transport (the railways and the river fleets). In most countries these modes of transport, once the "modern" transport of West Africa, could not survive unless they were subsidized by the government. At the same time, the old pattern of produce evacuation broke down. Produce bought by the firms at their line and river stations was increasingly evacuated by lorry (130) -- these buying stations became road stations in terms of our definition. It could be said that the Outer Zone swallowed up the Inner Zone, and the intermediaries were the great beneficiaries of the change. In these circumstances the firms saw no point in retaining their up-country stations. And so withdrawal cancelled the advance of the past.

10. Concluding remarks

Concentrating on technical and economic questions this paper has examined the literature on West Africa in order to find material relating to modern transport and the firms. As was to be expected, the results are uneven: some topics received attention from many authors while other topics were practically overlooked. This paper may help to redress the balance. More important, however, is the fact that some of my findings deviate from the views expressed or implied in the literature. I would like to review these briefly.

First, from the narrow perspective adopted in this paper it appears that the firms reached their zenith in the 1920's, that is about half-way the colonial period. By that time the retreat and decline of the firms could have been forecast because they allowed a vacuum to arise, which

acted as an incubator for the intermediaries. Although other perspectives may be adopted leading to a different date for the zenith, (131) the present perspective is an important one in a comprehensive history of the firms.

Secondly, I have grouped a number of topics under the heading "river-based advance". Some of these topics have appealed to general historians because they occurred when the European powers were not yet fully committed to a policy of territorial expansion in Africa. I have now argued that also for economic historians the river-based advance is the most interesting one because, proportionately, it demanded more capital than either the railway- or the road-based advance. But to assess these investments properly we have to distinguish inland navigation from ocean navigation and study the composition and growth of the river fleets. This may help us to understand better the aspirations (and fears) of the investing firms as well as their attempts to persuade their home governments to occupy the interior.

Thirdly, I have shown that the firms may be divided into railway and river firms. And I have argued that the railway firms were more modern and efficient. The distinction is particularly useful when one studies the firms in countries such as Senegal, Sierra Leone, and Nigeria, where firms of either type have operated. But broader hypotheses may be considered as well: it is likely that the greater efficiency of the railway firms was an advantage for the countries in which they operated. This may also have benefited the produce farmer.

Fourthly, it is instructive to distinguish a separate group of intermediaries and to define them in economic terms, namely as produce traders who depended on lorries for transport. This enables us to distinguish them from the older "middlemen". It is then possible to recognize a decline of the middlemen during the first two phases of the advance of the firms as well as the ascent of the intermediaries during the third phase. In my analysis the early downward and the later upward trend do not present a paradox any more. (132)

Fifthly, I have argued that the intermediaries became a serious threat to the firms in the 1930's. (This contrasts with the general view that low prices and the crisis of 1930 were the principal problem of the firms -- one which they successfully overcame by reorganization, amalgamation, and co-operation among themselves.) If the firms were really worried about the intermediaries, we may expect that their

attitude towards government intervention changed during the inter-war period. I suspect that they wanted the government to assume the role of umpire in the produce trade to protect them against the intermediaries. I would therefore plead for a systematic study of government intervention in this field from the beginning of the colonial period till the establishment of the Marketing Boards. This is no mean task but it is essential to supplement our picture of the organization of West African trade during the colonial period.

Notes

1. Frederick Pedler, The Lion and the Unicorn in Africa: A History of the Origins of the United Africa Company, 1787-1931 (London, 1971).
2. Catherine Coquery-Vidrovitch, "L'impact des intérêts coloniaux: S.C.O.A. et C.F.A.O. dans l'Ouest Africain, 1910-1965", Journal of African History, XVI (1975), pp. 595-621.
3. Colin Newbury, "Trade and technology in West Africa: the case of the Niger Company, 1900-1920", Journal of African History, XIX (1978), pp. 551-575.
4. Régis Robin, "La Grande Dépression vue et vécue par une société d'import-export en A.O.F.: Peyrissac (1924-1939)", Revue française d'Histoire d'Outre-Mer, Vol. LXIII, No. 232-233 (1976), pp. 344-358.
Some smaller or older publications are mentioned in Anthony G. Hopkins, "Imperial Business in Africa. Part I: Sources", Journal of African History, XVII (1976), pp. 38-41.
5. William Keith Hancock, Survey of British Commonwealth Affairs, Vol. 1: Problems of Economic Policy, 1918-1939, Part II (London, 1942), pp. 154-298.
6. John Mars, "Extra-Territorial Enterprises" in Mining, Commerce, and Finance in Nigeria, ed. by Margery Perham (London, 1948), pp. 45-136.
7. Jean Dresch, "Les Investissements en Afrique Noire", Présence Africaine, No. 13 (1952), pp. 232-7. I note that la traite (moderne) is a more precise term than "two-way trade". The vent-for-surplus model provides a good starting point for a definition of the two-way trade. See J.S. Hogendorn, "Economic Initiative and African Cash Farming: Pre-Colonial Origins and Early Colonial Developments", in Colonialism in Africa, 1870-1960, ed. by P. Duignan and L.H. Gann, Vol. IV, The Economics of Colonialism (Cambridge, 1975), pp. 283-328, in particular pp. 299-300 for his views on the firms.
8. Peter T. Bauer, West African Trade (Cambridge, 1954), pp. 104-44 and 202-9.
9. Anthony G. Hopkins, An Economic History of West Africa (London, 1973), pp. 198-203, 258-9, and 276-9.
10. Anthony G. Hopkins, "Imperial Business in Africa. Part II: Interpretations", Journal of African History, XVII (1976), pp. 274-5.
11. H. Laurens van der Laan, The Lebanese Traders in Sierra Leone (The Hague/Paris, 1975), chapters 2, 3, and 5.

12. Cf. Hopkins, History, pp. 197-8
13. Ibid., p. 137ff
14. Sokoto in Northern Nigeria was an exception. G.B. Ollivant opened a buying station here in 1919, which relied on camel transport. Pedler, Lion, p. 97.
15. I believe that this is the correct interpretation of Hancock's concept, see Hancock, Economic Policy, p. 204.
16. Ibid., "Since ... the opening of river and rail and road transport ..."
17. German firms established a fleet on this river in 1906, see Albert Wirz, Vom Sklavenhandel zum Kolonialen Handel: Wirtschaftsraume und Wirtschaftsformen in Kamerun vor 1914 (Zurich, 1972), p. 259.
18. See Pedler, Lion, pp. 159-60. It is possible that the shallow-draught vessels which Flint mentions were sternwheelers. See John E. Flint, Sir George Goldie and the Making of Nigeria (London, 1960), p. 121.
19. The incursions of ocean-going ships remained a cause of concern for the owners of river fleets on the Lower Niger, the Gambia, and the Senegal. The temptation to invade the rivers was greater when ocean freight rates were low. It was a real concession of Elder Dempster when it promised the Niger Company in 1907 to stay away from the river. Peter N. Davies, Sir Alfred Jones: Shipping Entrepreneur Par Excellence (London, 1978), p. 83.
20. Flint, Goldie, p. 32. The precise year in which Akassa was founded is not given.
21. Ibid., p. 36.
22. Ibid., p. 40.
23. Ibid., p. 326.
24. Ibid., pp. 67 and 326.
25. Jacques Meniaud, Haut-Sénégal-Niger: Géographie économique. Vol. I (Paris, 1912), p. 45.
26. Ibid., p. 110. This was two months before the Berlin Conference.
27. Ibid., p. 111.
28. Ibid., pp. 34-7. I assume that Meniaud's data refer to 1910. The sternwheelers had been put into service in 1899.
29. Pedler, Lion, p. 62.
30. Ibid., p. 59. This was actually the firm of William Goddard & Co, which was incorporated as the River Gambia Trading Company in 1882.
31. Ibid., p. 62.
32. Ibid., p. 144.

33. R. Szereszewski, Structural Changes in the Economy of Ghana, 1891-1911 (London, 1965), p. 25.
34. Pedler, Lion, p. 106. Steam launches remained the backbone of transport in this area until 1926, see Peter R. Gould, The Development of the Transportation Pattern in Ghana (Evanston, 1960), pp. 40 and 53.
35. John D. Hargreaves, Prelude to the Partition of West Africa (London, 1963), pp. 335-6.
36. Flint, Goldie, pp. 69-70 and 82-3.
37. The significance of steam should not be overrated. True, it was easier to handle a steam-powered vessel than a sailing one, (see Allan McPhee, The Economic Revolution in British West Africa (London, 1926), p. 72) but this was no major improvement. Steamboats were used on the Senegal in 1819, i.e. some 60 years before the breakthrough we are discussing here, see Philip D. Curtin, Economic Change in Pre-colonial Africa: Senegambia in the Era of the Slave Trade (Madison, 1975), p. 128.
38. Meniaud, Sénégal, p. 46. This was 23 years after construction began.
39. Ibid., pp. 70 and 89. On the Middle Niger there was also about 500 tons owned by the colonial government. I estimated the figure of 500 from incomplete data on pp. 74-7.
40. F. Baltzer, Die Kolonialbahnen, mit besonderer Berücksichtigung Afrikas (Berlin/Leipzig, 1916), pp. 62-4, 72-4, 160-2, 164, 204, 209, 211, and 214. The Kayes-Niger line, which we discussed above, is omitted from this list because it belongs to a different category. It was a linking-up line, built to supplement navigable water-ways, while the twelve lines listed here had to stand on their own. Other examples of linking-up lines were the Matadi-Stanley Pool line, the Mombasa-Lake Victoria line and the Jinja-Lake Kyoga line. In the costing of the linking-up lines the expensive railway was off-set by cheap water transport. This explains why construction of the linking-up lines came earlier, as Lugard noted in 1922, when he wrote that lines with "some definite objective" were built first, Frederick D. Lugard, The Dual Mandate in British Tropical Africa (third ed.; Edinburgh/London, 1926), pp. 463-4. The "loose-end" lines of our list came one or two decades later. Also omitted are lateral lines to connect a poor harbour with a good one: St. Louis-Dakar and Anecho-Lome. In many respects the Dakar-St. Louis resembled the lines of our list because the firms established many buying stations along this line, see Paul E. Pheffer, Railroads,

- and Aspects of Social Change in Senegal, 1878-1935 (Ph. D. thesis, Univ. of Pennsylvania, 1975), pp. 168 and 174-5.
41. Edward J. Taaffe, Richard L. Morrill, and Peter R. Gould, "Transport Expansion in Underdeveloped Countries: A Comparative Analysis", Geographical Review, Vol. LIII (1963), p. 503. This term corresponds closely to Lugard's "arterial lines", Lugard, Dual Mandate, p. 466, and to Suret-Canale's "économie-ligne", Jean Suret-Canale, Afrique Noire, Occidentale et Centrale, Vol. II, L'ère coloniale, 1900-1945 (Paris, 1964), p. 251. There is, however, a great difference with Hancock, who implies that the traders' frontier advanced in a broad front. It is more appropriate to think of an advance in salients or corridors.
 42. Pedler, Lion, p. 103.
 43. Jan Hogendorn, Nigerian Groundnut Exports (Zaria, 1978), pp. 59-61.
 44. Coquery-Vidrovitch, "Impact", p. 602, has two maps showing the buying stations of CFAO and SCOA in 1924, which are based on company reports.
 45. F.C. Tuboku-Metzger and H. Laurens van der Laan, Survey of Land Leases in Sierra Leone, as granted under the Protectorate Land Ordinance of 1927 (forthcoming). One should not equate documents and buildings. Some traders built without bothering about a document, whereas others quickly acquired a document, then changed their minds, and never put up a building.
 46. A.M. Hay, "The Development of Road Transport in Nigeria, 1900-1940", Journal of Transport History, n.s. 1 (1971), p. 97.
 47. The line Thies-Kayes was completed in 1923, Bouaké-Bobo-Dioulasso in 1934, Savé-Parakou in 1936, and Port Harcourt-Kaduna in 1926.
 48. Hay, "Nigeria", p. 98, mentions 1925; Van der Laan, Lebanese, p. 130, mentions 1926 for Sierra Leone; and Pheffer, Senegal, p. 457, mentions the "mid-1920's". In the cocoa areas of the Gold Coast the lorries came a few years earlier, Gould, Ghana, pp. 66 and 68. So all-embracing was the impact of the lorry in this region that Polly Hill, in agreement with the people, distinguished a "lorry age" and a "pre-lorry age", Polly Hill, The Migrant Cocoa-Farmers of Southern Ghana (Cambridge, 1963), pp. 17 and 234.
 49. I heard of lorries which were railed to Freetown on a low-loader to be repaired in the importer's workshop. After repair they were railed back to "their" feeder road. The firms also organized the petrol trade up-country, Pedler, Lion, p. 257.

50. Perhaps Lugard was the first to use this word in the West African context, Dual Mandate, pp. 475-6. Cf. McPhee, Economic Revolution, p. 128; Governors were anxious to increase exports as well as railway revenue; feeder roads served both purposes.
51. Pedler, Lion, p. 227. I think that these were road stations because line stations had been established in this area by the African Association and Miller Bros. in the years 1917-1919, Ibid., p. 269.
52. Ibid., p. 217.
53. Hancock, Economic Policy, p. 215n
54. Newbury, "Niger Company", p. 564.
55. Flint, Goldie, pp. 325-8; Scott R. Pearson, "The Economic Imperialism of the Royal Niger Company", Food Research Institute Studies, 10 (1971), pp. 80-3.
56. Pedler, Lion, pp. 169-70; Baltzer, Kolonialbahnen, p. 171, mentions that all Niger Company vessels had African captains by 1914.
57. Pedler, Lion, pp. 184-5.
58. Ibid., p. 158. For more detail, see Gilbert Walker, Traffic and Transport in Nigeria (London, 1959), p. 50.
59. Newbury, "Niger Company", p. 571, mentions that "the increasing amounts of stock 'locked up' in Nigeria, because of the seasonality of production and the river transport system" became a problem before World War I.
60. Presumably by mail boat to Lagos or Bonny or Fernando Po and thence by R.N.C. vessels to Akassa.
61. Newbury, "Niger Company", p. 554, noticed "an important functional (even conceptual) gap" between the directors in London and the staff in Africa during the period 1900-1920.
62. Ibid. Newbury observes that the organization was "tenuously linked by the company flotilla and by the inspection tours of the agent-general".
63. D.A.R. Richardson, "Private Enterprise on the River Gambia", Progress, The Unilever Quarterly, Vol. LI (1966), p. 233.
64. Ibid.
65. Meniaud, Sénégal, p. 39, mentions the Béarn, Richelieu, Turenne, and Gyptis. One of these, the Richelieu, may have been in use since 1883, see C.W. Newbury and A.S. Kanya-Forstner, "French Policy and the Origins of the Scramble for West Africa", Journal of African

- History, X (1969), p. 273n; they mention the Richelieu, Tamesi, and Soudan.
66. Jacques Chaupaud, "La navigation fluviale dans le moyen Niger", Cahiers d'Outre-Mer, XIV (1961), p. 269.
 67. Detailed information is not easy to obtain. It may well be that not all railway stations possessed a telegraph office. Baltzer, Kolonialbahnen, p. 441, points out that the railway stations in the German colonies had to be designed so as to have rooms for the postal and telegraph services.
 68. Another reason to speed up produce evacuation was the assumption (or illusion?) that a firm was financially less vulnerable if its produce stocks were on board a ship (where they could be sold) than somewhere up-country.
 69. Allister Macmillan, The Red Book of West Africa (second ed.: London, 1968), p. 70.
 70. Ibid., p. 68. It must be noted, however, that, according to Pedler, Lion, p. 93, Ollivant was established in Lagos in 1880. In the eyes of the Chadwick family Nigeria was more important than Sierra Leone because Leonard Chadwick left Freetown in 1902 to take charge of the Lagos branch. Ibid., p. 98.
 71. Ibid., p. 180.
 72. Macmillan, Red Book, p. 252.
 73. Coquery-Vidrovitch, "Impact", p. 596. SCOA spread north and south along the coast. Ibid.
 74. H. Laurens van der Laan, European Commercial Enterprise in Colonial Sierra Leone, 1896-1961: A Preliminary Survey (Leiden, 1973), pp. 12 and 31.
 75. It was in these countries that the terminology of the river-based advance carried over into the railway phase. In Senegal the railway towns were called escales, and in Nigeria "beach" was used for many line stations -- a curious extension of the meaning of these words.
 76. Meniaud, Sénégal, p. 54. There was a comparable decline of water transport in East Africa; transport on Lake Victoria (and traffic in Kisumu port) fell when the Ugandan railways were linked up with those of Kenya in 1928.
 77. For the siphoning off to Kaolack, see Pfeiffer, Senegal, pp. 257-8.
 78. Hogendorn, Groundnut, pp. 59-60.
 79. Pedler, Lion, pp. 150 and 269.

80. Newbury, "Niger Company", p. 559.
81. The fleet had become a liability, see Newbury's conclusion that the river had become a strait-jacket, Ibid., p. 575.
82. Pedler, Lion, pp. 183-5.
83. Ibid., p. 185.
84. Van der Laan, Lebanese, p. 135.
85. Walker, Nigeria, p. 48
86. Cf. Van der Laan, Lebanese, p. 39 and Newbury, "Niger Company", p. 555.
87. Pedler, Lion, pp. 182 and 185.
88. Mars, "Extra-Territorial", p. 46.
89. Ibid. Cf. Hancock, Economic Policy, p. 217, noted that general managers had to wait for cabled instructions about prices. Did the general managers complain about this in their conversations with him?
90. Report of the Commission on the Marketing of West African Cocoa, Cmd. 5845 (London, 1938) (Hereafter Nowell Report), p. 138. Only buying stations close to a telegraph office or telephone could be included in the new scheme.
91. Gould, Ghana, p. 44, mentions "a deliberate policy of keeping an economic road gap between Takoradi and Kumasi." For other road gaps in Ghana, Ibid., p. 71.
92. Taaffe, "Transport", pp. 506-7. Cf. Hopkins, History, pp. 151 and 196.
93. Van der Laan, European, p. 29.
94. Gould, Ghana, pp. 56 and 68. The Woermann Line and the Holland West Afrika Line, junior partners of Elder Dempster in the West African Shipping Conference, were presumably less reluctant to call at these smaller ports.
95. In countries without railways, such as Portuguese Guinea, Liberia, and the Gambia, road firms had a better chance.
96. Van der Laan, Lebanese, pp. 49-50.
97. Hopkins, "Interpretations", p. 280.
98. Ibid. Hopkins mentions "transition to bureaucratic forms of organization" p. 280; "the corporate revolution", p. 281; and the search for security, p. 283, all topics with a "European" background.
99. Coquery-Vidrovitch, "Impact", p. 601. She suggests that CFAO's network increased in density in the period 1923-1930. Later, in the 1930's, the number of trading posts of CFAO and SCOA increased again, Ibid., p. 608, but I suspect that the additional posts belonged to "tied" traders, see below.

100. Van der Laan, European, p. 33.
101. Ibid. There are three main explanations: 1. the replacement of old or burnt-down buildings; 2. in response to a diversion of produce routes; 3. in response to mining -- such stations were primarily merchandise shops but produce was bought as well.
102. I counted 14 road stations (against 74 line stations) in Sierra Leone, Ibid., pp. 20-24. Of these 14 four were located in mining areas. The firms could have established far more road stations, if they had wanted because many new roads were built.
103. I heard of one British lorry driver but he was employed by the Methodist Mission. Of course, European drivers were expensive and their salaries could not be earned back quickly with lorries that carried only one or two tons.
104. Weekes Motor Transport Service in Nigeria (not a trading firm!) was an exception, Pedler, Lion, p. 256. This firm believed that European drivers were cheaper than Nigerians, Hay, "Nigeria", p. 100.
105. Lugard, Dual Mandate, p. 473, felt that African drivers should be employed but only for short journeys so that the vehicles were back at the depot each night.
106. A former general manager of UAC, Mr. J. Minall, told me in 1972 about a gruesome accident with an AETC lorry which had happened up-country in 1922 or 1923. Many passengers had been killed or wounded. AETC then decided to buy no more lorries for the time being. They did without them for two or three years. Another problem was the absence of insurance companies and third party policies.
107. AETC put an African storekeeper in charge at the important road station at Kailahun in 1928. Letter from Mr. R.G. Fleming, former employee of AETC, of 8 May 1974.
108. I often noticed pride when a Lebanese told me to which firm his father or uncle had been tied. Having been brought up on the virtues of free competition I could not help being surprised.
109. Mars, "Extra-Territorial", p. 102.
110. There were a dozen Frenchmen and Swiss in Sierra Leone, Van der Laan, European, p. 18. Only a few of the European intermediaries survived the crisis of 1930 and the majority of these turned to non-commercial activities. They were an interesting group but not significant in economic terms.

In this paper Lebanese and Africans (as well as self-employed Europeans) are treated as one group. Normally they are treated separately. The tendency to do so derives from sociology, where it makes good sense to distinguish non-Africans from Africans. But in economics one should be cautious with this dichotomy.

111. Walker, Nigeria, p. 6. Cf. Suret-Canale, L'ère coloniale, p. 251, who uses the image of a lung.
112. See Van der Laan, Lebanese, pp. 133-5, for Sierra Leone; Hay "Nigeria", p. 101; Gould, Ghana, pp. 61 and 70. In Sierra Leone the combination of lorry and inland water transport was very effective. As we said before the firms were willing to turn to slow but cheap water transport, when produce prices were low. Where the firms were no longer loyal to the railways, the latter were in dire straights.
113. The restrictions in Senegal were probably the most severe, see Pheffer, Senegal, pp. 464-5.
114. Cf. Van der Laan, Lebanese, pp. 134-5.
115. Compare the use of dhows on Lake Victoria in the late 1920's, V.C.R. Ford, The Trade of Lake Victoria (Kampala, 1955), pp. 38-45.
116. Nowell Report, pp. 107-8 and 139.
117. When the seller came, the firm's personnel could not turn him away. Tied traders in particular had to be helped as soon as possible.
118. Nowell Report, pp. 107-8.
119. Ibid., p. 101.
120. Ibid., pp. 56 and 63.
121. Ibid., pp. 92-3 and 138. The firms were contrasted with intermediaries who were "operating ... out of reach of telephones or telegrams," Ibid., p. 106.
122. John K. Galbraith, American Capitalism: The Concept of Countervailing Power (rev. ed., London, 1957), pp. 110-1. The power of the intermediaries was the result of a process of commercial emancipation. Such a process was probably not confined to them. It may also have occurred among the produce farmers, in particular among those who sold directly to the firms and could acquire knowledge about the firms' methods and preferences through simple observation. Indirect trade, however, may have slowed down the process of commercial emancipation.

123. The frontier was maintained but a great deal of the work was done by different people: many European station managers were replaced by Africans in the early 1930's. This also weakened the firms.
124. Most firms felt themselves under a moral obligation to establish former employees in these buying stations. But some intermediaries also succeeded in buying a station. Cf. Mars, "Extra-Territorial", pp. 95n and 121 on the implications of a "back to the ports" policy.
125. Statistical and Economic Review (UAC), No. 23 (1959), p. 45.
126. Van der Laan, Lebanese, pp. 345 and 139.
127. Cf. Taaffe, "Transport", p. 505. The desire for political integration was an important motive behind the construction of trunk roads.
128. In West Nigeria this happened already in 1937, Hay, "Nigeria", p. 102.
129. Inland navigation in Sierra Leone declined. The launches I saw in 1970 were all old and delapidated.
130. In some cases this required permission from the Marketing Boards. The Sierra Leone Produce Marketing Board began to favour road transport in the mid-1950's, Van der Laan, Lebanese, p. 55.
131. Coquery-Vidrovitch, "Impact", pp. 610-1, puts the zenith of CFAO and SCOA in the period 1947-1951. The Korea boom boosted profits at the end of this period, in particular in the French colonies, where there were no Marketing Boards as yet.
132. This paradox was noted by Hopkins, History, p. 205.

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