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## TRANSIT PROBLEMS OF AFRICAN LAND-LOCKED STATES

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## INTRODUCTION

1. The problem of free access to the open sea for land-locked countries, which constitutes a part of a major problem of freedom of transit, is very important for Africa, as out of 36 independent African countries, 10 are land-locked.<sup>1/</sup> Together with 4 other land-locked, but dependent territories,<sup>2/</sup> the number of land-locked countries in Africa totals 14. This represents about half of all the land-locked countries of the world.

2. The importance of transit trade for the African land-locked States is all the more relevant, as the proceeds from the external trade constitute the major part of their national income. From the transport point of view, the collection of export commodities and distribution of import goods provide the main source of demand for transport facilities inside and outside these countries.

3. Therefore, the member-States of the United Nations Economic Commission for Africa are paying great attention to the transit problems, and have instructed the secretariat of ECA to study the problems from all angles.<sup>3/</sup>

4. The present study of the secretariat endeavours to supply the information necessary for assessing the disadvantageous position of land-locked States in Africa and to present comparative data on the relative position of each land-locked country vis-a-vis the respective transit countries. The analyses are based on the position which existed in 1962, the year when the conditions of transit were mainly the same as before independence. Ever since, the newly independent land-locked countries have been seeking to improve their "land-locked" position by co-operation with the transit countries. Recent developments in this regard are also mentioned in the paper.

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<sup>1/</sup> Burundi, Central African Republic, Chad, Malawi, Mali, Niger, Rwanda, Uganda, Upper Volta and Zambia.

<sup>2/</sup> Rhodesia, Bechuanaland, Swaziland, Basutoland.

<sup>3/</sup> Establishment of main international routes for the West and East sub-regional highway networks; study of the trans-Sahara link; legal safeguards of freedom of transit for land-locked countries; feasibility of uniform right-hand driving in Africa; acceptability of the TIR Convention for African conditions, etc.

5. The great achievements of the Organization of African Unity to ensure co-operation amongst African countries make it feasible to envisage quick and adequate action in the improvement of transit routes, for the mutual benefit of African land-locked and transit countries.

6. In all observations on the transit problems of African land-locked states, the secretariat has proceeded from the assumption that the growth of transit traffic is always to the mutual benefit of both land-locked and transit countries.

## CHAPTER I

### TRANSIT PROBLEMS OF AFRICAN LAND-LOCKED STATES

7. The problem of free access of a land-locked country to the open sea is part of the more important problem of freedom of transit. The latter includes the fundamental economic interests of and legal safeguards for the countries concerned.

#### (a) The scope of the problem

8. The transit problems of land-locked States have a rather long history and involve many different questions: legal, technical, economic, as well as social, the latter influencing the actual importance of the first three.

9. Historically, land-locked territories have had to pay heavy dues or tolls to maritime, or more advantageously placed territories for right of way. This was the case as long as transport was inadequate and there was no inter-media competition. But the changes in the economic situation of the world such as the invention of railways and the increasing realization of the inter-dependence of nations led gradually to the almost complete disappearance of transit dues and tolls, which began in Europe by the end of the nineteenth century. So it can be stated that besides international conventions and bi-lateral agreements, the development of the various means of transport and the competition between them have always been and still remain leading agents of change in the legal aspects of transit problems.

#### (i) Legal aspects

10. Legal questions influence the whole problem of freedom of transit since the availability of internationally adopted principles provides certain safeguards for land-locked States, and improves understanding between land-locked and transit countries.

11. Attempts to codify, on an international level, different regulations relating to the free passage through adjacent countries started with the establishment of the first world-wide organization - the League of Nations.

In the Covenant the following clause appears: "The Members of the League will make provision to secure and maintain freedom of communications and of transit and equitable treatment for the commerce of all Members of the League".<sup>1/</sup>

12. In pursuance of this provision, the Barcelona Conference, convened in 1921, adopted a number of international conventions, relating to the question of freedom of transit:

- Convention and Statute on Freedom of Transit;
- Convention and Statute on the Regime of Navigable Waterways of International Concern;
- Declaration Recognizing the Right to a Flag of States Having no Sea-coast;
- Recommendations Relative to the International Regime of Railways;
- Recommendations Relative to Ports placed under an International Regime.

13. The next international conference in Geneva in 1923 adopted two conventions:

- Convention and Statute on the International Regime of Maritime Ports; and
- Convention and Statute on the International Regime of Railways.

14. After the establishment of the United Nations the question of freedom of transit was tackled in the following international conventions:

- International Air Services Transit Agreement (1944);
- General Agreement on Tariffs and Trade (GATT-1947);
- Havana Charter for an International Trade Organization (1948);
- Convention on the Territorial Sea and the Contiguous Zone (Geneva, 1958);
- Convention on the High Seas (Geneva, 1958).

<sup>1/</sup> Quoted from the Documents of the United Nations Conference on the law of the sea. A/Conf.13/37, Vol.I page 321.

15. But none of these conventions dealt specifically with the problems of free access to the sea by land-locked states, and they did not receive international recognition.

16. That is why the recent United Nations Conference on Trade and Development decided unanimously to convene a conference of plenipotentiaries in the middle of 1965 to consider a draft for adoption of the Convention relating to the transit trade of land-locked States.

17. The respective Convention on transit trade of land-locked states was adopted on 8 July 1965 at the conference in New York and provides safeguards for land-locked States with regard to their rights to free access to the sea, as well as codifying the generally adopted principles relating to the practical solutions of these rights; namely:

- The recognition of the right of each land-locked State to free access to the sea and of identical rights and treatment for their vessels as compared to those enjoyed by coastal States;
- To enjoy all these rights in practice, the land-locked States should be afforded by all States free and unrestricted transit on terms specified in regional and other international agreements;
- The facilities and special rights accorded to land-locked countries in view of their special geographical position are to be excluded from the operation of the most-favoured-nation clause.

18. The ratification of this convention and its entry into force will safeguard the rights of land-locked countries and facilitate the conclusion of bilateral agreements specifying the terms of transit for land-locked States.

(ii) Technical aspects

19. The disadvantageous position of a land-locked country arises in the first place from its geographical position. In this sense the position of Switzerland (340 km from the sea) and of Malawi (360 km from the sea) seem to be just the same. But in actual fact, under the present level of development of transport technique, the real disadvantage of any land-locked country depends on the state of transport facilities serving its transit routes.

20. As it is shown in Chapters II and III, the real disadvantage of most African land-locked countries comes out of the fact that not all of them have a direct railway outlet to ocean ports. They are therefore forced to use road transport, which is much more expensive, for their transit trade. The situation is aggravated by the fact that Africa is a large continent and some of its land-locked States are situated as far as 2,000 km from the nearest sea port.

(iii) Economic aspects

21. Much of this study deals with the economic aspects of the transit problem of land-locked States. Here it seems sufficient to mention only the main features of the problem.

22. First of all, it must be emphasized that the importance of the transit problem arises from the fact that the total economy of the African land-locked States depends on external trade, and so on the ability to trans-ship export crops to the world market. As is shown later, the cost of transit is sometimes so high as to make the crop uncompetitive in the world market. Ground-nuts from Chad is an example.

23. Thus, the most important feature of the problem is the terms provided by the transport companies on the transit routes serving the external trade of the land-locked countries.<sup>1/</sup>

(iv) Social aspects

24. As a matter of fact, the economic aspects of the transit problems of land-locked countries may be considered as most important. But the social aspects of the problem cannot be ignored nowadays.

<sup>1/</sup> The existing transport system was described in the Report of the Eastern African Transport Conference (E/CN.14/193, p.11) as follows: "European powers came to Africa not as philanthropists but to exploit the continent's natural resources for the industrial machine of Europe and that much of the existing transport system in (Eastern) Africa bore witness to this fact".

25. The relations between a land-locked and a transit country cannot but influence the terms of transit.

26. The rupture of relations between Mali and Senegal in 1960 brought with it very drastic changes in the terms of transit for Mali, which had to readjust its external trade through a new transit route via the Ivory Coast. The resumption of economic relations between these countries since 1963 has enabled Mali to profit by using two transit routes.

27. The negotiations between Niger and Nigeria in 1964, which dealt inter alia with transport problems, improved the prospects for the transit trade of Niger, especially for the eastern parts of the country.

28. An agreement, reached between Tanzania and Zambia about the building of a railway connexion, will fundamentally change the terms of transit for the main export product of Zambia - its copper.

29. The switching of Rwanda's external trade from the Congo transit route to the route through Uganda and Kenya improved the terms of transit and was a logical conclusion of Rwanda's independence, which gave it a free choice based on economic and not political considerations.

30. In other words, the new conditions created in Africa after the majority of its countries achieved political independence, provided the possibility for a new kind of economic relations between land-locked and transit countries. The establishment of the Organization of African Unity brings into this matter not only the new spirit of brotherhood, but also the real conditions for implementing the new terms of transit, advantageous both to land-locked and transit countries.

(b) Activities in the field of freedom of transit in Africa

31. The approach to the problem of transit in Africa has had two stages in its history: the colonial period and the present period of co-operation amongst newly independent African states.

32. As most African countries were under colonial rule when some of the international agreements were concluded, they were not represented at international conferences, with the result that they did not participate in the respective conventions. Thus not a single African country participated as a sovereign state in the international conventions of 1921-1923 relating to the question of transit. (Ethiopia, formerly a land-locked country, signed the Barcelona convention of 1921, but has not ratified it).

33. In a few cases, African countries were parties to some of these conventions as subjects of colonial powers.<sup>1/</sup>

34. Apart from this, there are examples of bilateral agreements concerning African countries concluded between colonial powers about the rights of transit of one colony through the territory of the other.<sup>2/</sup>

35. Having gained their independence, the new African states are considering the question of whether to reaffirm all conventions imposed on them by former colonial powers, or reconsider their attitude towards these conventions as well as towards bilateral agreements to which they were passive parties.

36. The second period is characterized by the adhesion of the independent African countries to some of the international conventions, relevant to the problems of transit, on their own behalf, or by concluding bilateral agreements.

37. The following countries are now parties to the following international agreements on transit matters:

- (i) International Air Service Agreement (1944) - Morocco (1957), Cameroon (1960), Nigeria (1961), Ivory Coast (1961) and Senegal (1961);

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<sup>1/</sup> So, the Barcelona Convention is applicable to Rwanda and Burundi as former Belgian trusteeship territories. The Federation of Rhodesia and Nyasaland was a contracting party to the General Agreement on Tariffs and Trade.

<sup>2/</sup> For instance, between Great Britain and Portugal on transit through Mozambique (14 November 1890 and 17 June 1950); between Belgium and Great Britain on transit through East Africa (15 March 1921 and 6 April 1951).

(ii) General Agreement on Tariffs and Trade (1958) - Cameroon, Central African Republic, Chad, Congo (Braz.), Dahomey, Gabon, Ghana, Ivory Coast, Madagascar, Mauritania, Malawi, Nigeria, Niger, Senegal, Sierra Leone, Rhodesia, Tanzania, Uganda, Upper Volta, Zambia;

(iii) Convention on the High Seas (1958) - Central African Republic (1962), Ghana (1958), Madagascar (1962), Nigeria (1961), Senegal (1961), Sierra Leone (1962) and Tunisia (1958).

38. The problems of transit have not as yet become a separate item in the contracting relations between African countries, but are usually dealt with in trade or other economic agreements.

39. Thus, the trade agreements of many West African countries usually contain an article stipulating that

"the contracting Parties will promote by all means available to them the development of transit trade through their countries, which may be of interest for both countries, in accordance with the laws, regulations and rules existing in their countries in respect of goods in transit, no import duties will be charged on transit goods from the country of one Contracting Party to the Other".<sup>1/</sup>

40. According to the Commercial agreement, between Senegal and Mali concluded on 8 June 1963, the parties undertook to promote commercial transit through each country.<sup>2/</sup> In pursuance of this general clause, the countries decided to restore railway traffic between them<sup>3/</sup> and agreed that Senegal should allocate to Mali, for its transit, a part of the port installations in the ports of Dakar and Kaolack.<sup>4/</sup> The detailed terms of transit from Mali to these ports were established in the Convention ferroviaire entre la Régie du chemin de fer du Mali et la Régie des chemins de fer du Sénégal, concluded at the same time (8 June 1963).

1/ Examples of such articles may be found in the trade agreements of Ghana with the Upper Volta, Mali, Guinea, or of Senegal with Sierra Leone and Liberia.

2/ Art.6, Accord commercial du 8 juin 1963.

3/ Art.1, Accord sur le trafic international par voie ferrée du 8 juin 1963.

4/ Art.3, Accord au sujet de l'utilisation des ports de Dakar et Kaolack du 8 juin 1963.

41. ECA's investigation of transit problems approaches the matter from two angles: transport facilities and Customs facilities.
42. Under the auspices of ECA, two sub-regional transport conferences were convened, one in October 1961, for the West African sub-region, and the other in October/November 1962, for the East African sub-region.
43. The West-African Transport Conference, selected the priority routes, that are to be considered as part of the sub-regional network and be granted priority in respect of development programmes.<sup>1/</sup>
44. The East African Transport Conference asked the secretariat to study the special problems of land-locked States within the sub-region and the respective study Transit problems of Eastern African Land-Locked States (E/CN.14/INR/44) was presented to the Second Session of the Standing Committee on Industry, Natural Resources and Transport in 1963.
45. In pursuance of ECA Resolution 61(IV), the secretariat is participating in the study of problems of transport across the Sahara, one of the purposes of which is to provide an additional outlet for Mali and Niger towards the European market.<sup>2/</sup> Now a special Committee of Four has been established to carry out the study of trans-Sahara transport problems.
46. In pursuance of ECA resolution 28(III), a Working Party on Customs Administration in West Africa was held in October 1961. The party studied, inter alia, the question of bilateral transit agreements. Following its recommendation, an Expert Panel on transit traffic in West Africa was convened in 1963. It adopted a recommendation on freedom of transit (opening for transit trade of all routes suitable for this purpose, abolishing or decreasing of administrative charges levied in respect of the transit of goods etc.).<sup>3/</sup>

<sup>1/</sup> See report of the West Africa Transport Conference - E/CN.14/147, Annex III.

<sup>2/</sup> The papers E/CN.14/194 - Add.1; E/CN.14/248 - Annex II, and a note by the Secretariat - 64-815, were produced on this subject.

<sup>3/</sup> Report of the Expert Panel on transit traffic in West Africa E/CN.14/206.

47. The other recommendation of this Panel was that work should start to determine conditions under which The Customs Convention on the International Transport of Goods under cover of TIR Carnets might be adopted in Africa, modified as required to suit local conditions.<sup>1/</sup> Up till now the conclusions of the experts have been negative, as the adoption of this TIR Convention would be premature, since a better approach would be to conclude bilateral agreements.<sup>2/</sup>

48. The seventh session of ECA set up a Working Party on Transport and Telecommunications and one of the tasks of this Working Party will be to carry on studies on transit problems with a view to helping the governments concerned to find solutions, with particular reference to land-locked States.<sup>3/</sup>

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- 1/ Report of the Expert Panel on transit traffic in West Africa, E/CN.14/206.
  - 2/ E/CN.14/303, p.5 and Rapport sur la mission de M. Coquoz Maurice, haut fonctionnaire des douanes suisses, dans divers pays de l'Ouest Africain, effectuée de mai à juillet 1964.
  - 3/ Resolution 128(VII) and E/CN.14/313/Rev.1, item 31.

## CHAPTER II. TRANSPORT AND COMMUNICATIONS

## POSITION OF AFRICAN LAND-LOCKED COUNTRIES

49. At the sixth session of ECA, in 1964, the inadequacy of road, rail, sea and air transport networks in Africa was stressed as a serious handicap to the growth of trade and industry and to the modernization of agriculture. In the statement of the Executive Secretary of ECA to the session it was also stated that there was the particular problem of the land-locked countries of Africa, as the cost of transport at the present time made their produce almost non-competitive in world markets and added considerably to the price of imported capital and consumer goods.<sup>1/</sup>

(a) The importance of external trade for the economies of the land-locked countries

50. In many cases export crops or mining products constitute the main item in the monetary sector of the gross domestic product of African land-locked countries. But the general picture for all these countries is rather inconsistent, as being the result of the influence of two major factors, acting in opposite directions:

- The more under-developed a country is the greater is the part of its monetary GDP which falls on the activities connected with its export, thus increasing the importance of external trade in the country's economy;
- The more land-locked a country is the less opportunities it has for export, thus reducing the importance of external trade in the country's economy.

51. The resulting general picture is as follows:

<sup>1/</sup> E/3864/Rev.1 - Annex V, p.182.

TABLE 1  
Importance of the external trade in the economy of land-locked States (1962)

	Percentage of export in GDP	Percentage of export in monetary sector of GDP
1. Burundi	16	29
2. C.A.R.	12	21
3. Chad	8	15
4. Malawi	40	83
5. Mali	4	8
6. Niger	6	17
7. Rwanda	16	29
8. Uganda	26	36
9. Upper Volta	2	7
10. Zambia	59	69
AVERAGE:	25	40
ALL OAU states	19	-

Sources: See Annex 1.

52. It may be said that the economies of Malawi and Zambia and to some extent of Uganda are influenced by their exports, which contribute more than half of their monetary incomes. The economies of such land-locked countries as Burundi, the Central African Republic, Chad, Niger and Rwanda are strongly influenced by difficult conditions of transit and so in their case the percentage of export does not exceed 20 per cent of the monetary sector of their GDP. In the case of Mali, the low percentage (8 per cent) is due to the very difficult conditions in which Mali found itself in 1962 because of the rupture of relations with Senegal and the necessity of diverting its external trade through the more expensive route via the Ivory Coast to Abidjan. For the Upper Volta the low percentage (7 per cent), is due to the lack of exportable commodities, either agricultural or mining.

(S.S.I.)

54. The disadvantage arising from the land-locked position of all these countries manifests itself not only through the dependence of their economies on exports, but also through a very low diversification of their exports, when one or two commodities provide nearly the total of the country's export revenue.

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TABLE 2

Diversification of exports of land-locked countries (for 1962) in million

US dollars

	Total export	of which main commodity		
		Commodity	Export	% of total export
1. Burundi	10	Coffee	7	70
2. Central African Republic	14	Cotton	5	65
		Coffee	4	
3. Chad	25	Cotton	12	48
4. Malawi	29	Tobacco	15	96
		Tea	9	
5. Mali	29	Ground-nuts	7	24
6. Niger	19	Ground-nuts	11	58
7. Rwanda	10	Coffee	5	90
		Ores	4	
8. Uganda	106	Coffee	56	75
		Cotton	23	
9. Upper Volta	8	-	-	-
10. Zambia	335	Copper	305	91
Total:	585		463	79

Source: Annex II

55. As the Table 2 shows, coffee, cotton, ground-nuts, tobacco, tea and ores account for about 80 per cent of total exports of African land-locked countries, the main reason being that only a highly competitive commodity can bear the costs of transportation to the ocean and reach the world market.

56. The big role of external trade in the economy of land-locked countries justifies the conclusion that it is the main source of demand for transport facilities, especially if one bears in mind the fact that imports, which are not included in the GDP, add to the demand for transport facilities (and roughly speaking double this demand).<sup>1/</sup>

(b) Transit routes of African land-locked States

57. A country's remoteness from the coast is obviously an important element in the problem of its access to the world market, and the rounded distance of each African land-locked state from the sea is as follows:

<sup>1/</sup> According to a study of the University of Paris, the demand for transport facilities in 1960 was:

	in million ton-km
For import commodities	1,138
For export commodities	657
For local goods	351

These figures cover former French West Africa and show that more than 80 per cent of the demand was provided by export-import commodities.

- Transports terrestres dans l'Ouest Africain. Evolution en volume calcul d'élasticités. Institut d'étude du développement économique et social. Université de Paris. Tableau 14 (388.1 (664) P 2325).

TABLE 3  
Rounded distances to ocean ports

	Modes of transport involved	Distance in km <sup>*</sup>	
		To the Atlantic Ocean	To the Indian Ocean
1. Burundi	rail-lake	-	1,500
2. Central African Republic	rail-river	1,700	-
3. Chad	rail-road-river	2,100	-
4. Malawi	rail	-	360
5. Mali	rail-road	700	-
6. Niger	rail-road	1,000	-
7. Rwanda	rail-road-lake	-	1,600
8. Uganda	rail	-	1,100
9. Upper Volta	rail	630	-
10. Zambia	rail	2,000	1,500

\* From the frontier of the land-locked country

58. Thus, the rounded distance from the ocean (Atlantic or Indian) lies between 360 km and 2,100 km, and in many cases the transit involves two or three modes of transport. Only in one case - Zambia does the railway crosses the country and provide outlets to both ocean coasts. In four cases - Malawi, Mali, Uganda and the Upper Volta - the land-locked states are served by railways reaching their territory. In five other cases - Burundi, Central African Republic, Chad, Niger and Rwanda, - transit involves road or river/lake transportation to or from railway termini in transit countries.

59. The transit traffic of African land-locked states is served by 13 ocean ports: 9 ports on the Atlantic coast and 4 ports on the Indian Ocean coast. The tonnage handled by each port is as follows:

	Volume of export-import goods in '000 tons	
	Indian Coast	Atlantic Coast
1. Mombasa (for Rwanda and Uganda)	770	-
2. Beira (for Zambia and Malawi)	607	-
3. Lorenzo-Marquês (for Zambia)	532	-
4. Abidjan (for Mali, Niger and Upper Volta)	-	319.4
5. Pointe-Noire (for Chad and Central African Republic)	-	136
6. Lagos (for Chad and Niger)	-	125
7. Dar-es-Salaam (for Rwanda and Burundi)	117	-
8. Cotonou (for Niger)	-	81
9. Conakry, Douala, Burutu, Lobito (for Mali, Central African Republic, Chad and Zambia respectively)	-	19
Total:	2,026	680

60. The following transit countries are most important for the African land-locked countries: Ivory Coast, Dahomey, and Nigeria on the Atlantic coast and Kenya, Tanzania and Mozambique on the Indian Ocean coast.

61. The schematic map of transit routes shows the relative importance of each outlet towards the ocean (Annex III).

(i) Burundi

62. The external trade of Burundi is served at present by one main transit route from the port of Bujumbura on Lake Tanganyika to the railway terminus at Kigoma port (210 km) and then by railway through Tanganyika to the ocean port of Dar-es-Salaam (1,290 km).

63. The Bujumbura port, built in 1962 with a loan from the International Bank for Reconstruction and Development, is now operated by the Belgian Compagnie des chemins de fer du Congo supérieur aux grands lacs africains (CFL). This company also operates services on Lake Tanganyika between Bujumbura and Kigoma and the port installations of the former Belbase in Kigoma port. The railway services through Tanganyika are operated by the East African Common Service Organization East African Railways and Harbours (EAR & H).

64. Traffic on this route has been hampered during last three years due to the persistent rise of the level of Lake Tanganyika which caused the flooding of port installations, first in Kigoma and then in Bujumbura. These unfortunate circumstances add to the difficulties experienced by Burundi in the trans-shipment of her external trade goods towards the world market (delay and additional costs of reloading).

65. Before the independence of Burundi, more than 80 per cent of its external trade took a much longer and more expensive transit route through the Congo (DR) to the Atlantic Ocean port of Matadi (3,400 km), as at that time Burundi was a part of the Belgian Congo Customs union.

(ii) Central African Republic

66. The external trade of the Central African Republic goes through the so-called voie fédérale from Bangui port on the Oubangui river by the Oubangui and the Congo rivers (1,260 km) up to the port of Brazzaville and then by the Congo - Océan railway (510 km) through Congo (Brazzaville) to the ocean port of Pointe-Noire.

67. All transport services on this transit route are provided by the inter-State organization Agence transéquatoriale des communications, which was created by an agreement of 15 January 1959 between the CAR, Chad, Congo (Brazzaville) and Gabon.

68. The other transit route for the CAR is via Cameroon to the ocean port of Douala (680 km by road to Yaoundé and then 310 km by rail to Douala). This route is not much used because of the high costs of road haulage, but if the railway is in the future extended to Goyoum and then to Bangui, this route will become the main transit outlet for the CAR.

(iii) Chad

69. The external trade of Chad is served by four transit routes:

- Through Cameroon and Nigeria from Fort Lamy to Maiduguri by road (260 km) and then by rail (1,800 km) to Lagos.<sup>1/</sup> This route is used mainly for importation. The haulage of goods on the road-stretch is shared between Chad and Nigerian hauliers - 85 per cent and 15 per cent respectively.

- Through Cameroon to Garoua by road (110 km) and then through Nigeria by the Benue and the Niger rivers (1,500 km) to the river/ocean port of Burutu in Nigeria. The road stretch of the route is operated by Chad hauliers, and the river services by Nigerian companies: The Niger River Transport, The Holt Transport Company and The Niger-Benue Transport Company.

- Through Cameroon by road via N'Gaoundéré (1,190 km) to Yaoundé and then by rail (310 km) to the ocean port of Douala.

- Through the CAR by road (520 km) to Bangui and then via the voie fédérale to Pointe-Noire (1,770 km).

70. Chad, the CAR and Congo (Brazzaville) are members of the Equatorial Customs Union and thanks to some special concessions afforded by the Agence transéquatoriale des communications to the Chad traffic on the voie fédérale, this route, in spite of being the longest one, is the main transit artery for Chad.

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<sup>1/</sup> Since 1964, after the completion of the Bornu extension of the Nigeria Railways. Previously the route went through Kano.

(iv) Malawi

71. The total volume of Malawi's external trade goes by rail (360 km) through Mozambique to the ocean port of Beira. The transit part of the route is served by two British-owned railway companies: Central African Railways Co. Ltd. and Trans-Zambia Railway Co. Ltd.

(v) Mali

72. Mali has the choice of three transit outlets towards the Atlantic Ocean coast:

- Through Senegal to Dakar by rail (640 km);
- Through Guinea by road (220 km) or by the Niger river (385 km) to Kouroussa and then by rail (810 km) to the port of Conakry;
- Through the Ivory Coast first by road (80 km) to the railway at Ouangolodougou and then by rail (675 km) to Abidjan. (Or by road (120 km) to the railway station of Bobo-Dioulasso in the Upper Volta and then by rail (800 km) to Abidjan).

73. In 1962, due to the rupture of economic relations between Mali and Senegal, all the external trade of Mali took the longer and more expensive transit route via Abidjan. Since 1963, apparently, the main part of Mali's external trade has returned to the traditional outlet through Senegal.

(vi) Niger

74. Niger has two practically equal outlets to the Atlantic Ocean: through Dahomey or through Nigeria, but, owing to technical and historical circumstances, the use of each route does not always reflect the purely economic considerations for the choice.

75. The route through Dahomey goes from Cotonou by rail (440 km) up to Parakou and then by road (315 km) via Malanville. This route is served exclusively by the inter-State Organisation commune Dahomey-Niger (OCDN).

76. The route through Nigeria goes via different frontier points by road (200 km) to Kano - on the Nigerian Railways - and then by rail (1,150 km) to Lagos. The road stretch of the route is served mainly by Nigerian hauliers.

(vii) Rwanda

77. Rwanda has an equal choice of two transit outlets towards the Indian Ocean coast:

- through Uganda and Kenya to Mombasa, and
- through Burundi and Tanganyika to the port of Dar-es-Salaam.

78. The Mombasa route is by road (430 km) to Kampala and then by rail (1,210 km) through Uganda and Kenya. The road stretch of the route is served by Ugandan transport firms (Cong Links Ltd., and others). The railage is achieved by the East African Common Service Organization East African Railways and Harbours.

79. The Dar-es-Salaam route is by road through Burundi (135 km), then by lake (210 km) to Kigoma and then by rail (1,290 km) through Tanganyika. The road section of the route through Burundi is operated by local Burundi or Rwandese hauliers. The port services in Bujumbura and shipment by lake are provided by the Belgian Compagnie des Chemins de fer du Congo supérieur aux grands lacs africains, which has exclusive operational rights in this part of Lake Tanganyika.

(viii) Uganda

80. The total transit traffic of Uganda goes by rail (1,088 km) through Kenya to the port of Mombasa and is served by East African Railways and Harbours.

(ix) Upper Volta

81. The total volume of Upper Volta external trade goes by rail (630 km) through Ivory Coast to Abidjan and is served by the Régie du chemin de fer Abidjan-Niger.

(x) Zambia

82. Zambia has the choice of two transit routes towards the Indian Ocean coast (to Beira or Lorenzo Marquês) and one transit route to the Atlantic Ocean port of Lobito.<sup>1/</sup>

<sup>1/</sup> There is also railway connections through Bechuanaland to the ports of the Republic of South Africa.

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83. Both routes towards the Indian Ocean are by rail (1,540 km) through Rhodesia and Mozambique and are served by Rhodesia Railways up to the frontier of Mozambique and then by Mozambique Harbours, Railways and Transport.

84. The route to the Atlantic Ocean is by rail (2,020 km) via Sakania through the Congo (DR) and Angola to Lobito.

85. For the purpose of consistency all distances in this paper are given to or from the frontier of the land-locked country.

1.2	1.1	1.2	1.1
1.4	1.4	1.4	1.4
1.5	1.5	1.5	1.5
1.6	1.6	1.6	1.6
1.7	1.7	1.7	1.7
1.8	1.8	1.8	1.8
1.9	1.9	1.9	1.9
2.0	2.0	2.0	2.0
2.1	2.1	2.1	2.1
2.2	2.2	2.2	2.2
2.3	2.3	2.3	2.3
2.4	2.4	2.4	2.4
2.5	2.5	2.5	2.5
2.6	2.6	2.6	2.6
2.7	2.7	2.7	2.7
2.8	2.8	2.8	2.8
2.9	2.9	2.9	2.9
3.0	3.0	3.0	3.0
3.1	3.1	3.1	3.1
3.2	3.2	3.2	3.2
3.3	3.3	3.3	3.3
3.4	3.4	3.4	3.4
3.5	3.5	3.5	3.5
3.6	3.6	3.6	3.6
3.7	3.7	3.7	3.7
3.8	3.8	3.8	3.8
3.9	3.9	3.9	3.9
4.0	4.0	4.0	4.0
4.1	4.1	4.1	4.1
4.2	4.2	4.2	4.2
4.3	4.3	4.3	4.3
4.4	4.4	4.4	4.4
4.5	4.5	4.5	4.5
4.6	4.6	4.6	4.6
4.7	4.7	4.7	4.7
4.8	4.8	4.8	4.8
4.9	4.9	4.9	4.9
5.0	5.0	5.0	5.0
5.1	5.1	5.1	5.1
5.2	5.2	5.2	5.2
5.3	5.3	5.3	5.3
5.4	5.4	5.4	5.4
5.5	5.5	5.5	5.5
5.6	5.6	5.6	5.6
5.7	5.7	5.7	5.7
5.8	5.8	5.8	5.8
5.9	5.9	5.9	5.9
6.0	6.0	6.0	6.0
6.1	6.1	6.1	6.1
6.2	6.2	6.2	6.2
6.3	6.3	6.3	6.3
6.4	6.4	6.4	6.4
6.5	6.5	6.5	6.5
6.6	6.6	6.6	6.6
6.7	6.7	6.7	6.7
6.8	6.8	6.8	6.8
6.9	6.9	6.9	6.9
7.0	7.0	7.0	7.0
7.1	7.1	7.1	7.1
7.2	7.2	7.2	7.2
7.3	7.3	7.3	7.3
7.4	7.4	7.4	7.4
7.5	7.5	7.5	7.5
7.6	7.6	7.6	7.6
7.7	7.7	7.7	7.7
7.8	7.8	7.8	7.8
7.9	7.9	7.9	7.9
8.0	8.0	8.0	8.0
8.1	8.1	8.1	8.1
8.2	8.2	8.2	8.2
8.3	8.3	8.3	8.3
8.4	8.4	8.4	8.4
8.5	8.5	8.5	8.5
8.6	8.6	8.6	8.6
8.7	8.7	8.7	8.7
8.8	8.8	8.8	8.8
8.9	8.9	8.9	8.9
9.0	9.0	9.0	9.0
9.1	9.1	9.1	9.1
9.2	9.2	9.2	9.2
9.3	9.3	9.3	9.3
9.4	9.4	9.4	9.4
9.5	9.5	9.5	9.5
9.6	9.6	9.6	9.6
9.7	9.7	9.7	9.7
9.8	9.8	9.8	9.8
9.9	9.9	9.9	9.9
10.0	10.0	10.0	10.0

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86. The distances given in this paper are for the purpose of consistency only and are not intended to be used for any other purpose. The distances are given to or from the frontier of the land-locked country.

### CHAPTER III

#### TERMS OF TRANSIT

##### (a) Influence of modes of transport on the cost of transit

86. The terms of transit for the African land-locked states are as follows:

TABLE 4

#### Average rates on the transit routes

in US cents per ton-km

		For export goods	For import goods
1. Upper Volta		1.1	2.6
2. Burundi		1.4	2.1
3. Uganda		1.4	2.1
4. CAR		1.5	2.0
5. Zambia		1.5	2.0
6. Mali		1.5	3.3
7. Chad		2.1	3.1
8. Niger		2.2	2.8
9. Rwanda		2.6	3.2
10. Malawi		3.7	5.3
	Average:	1.5	2.5
Source: Annex IV			

87. These varied and inconsistent rates are the result of many different causes, which contributed to the over-all final average rate for the whole transit route. In general these causes are as follows:

- (i) Number of modes of transport participating in the total haulage;
- (ii) Necessity of using road transport and the relative length of road transport in the whole distance;

(iii) Tariff policy pursued by the carriers;

(iv) Influence exercised by the State.

88. Considering the modes of transport serving transit routes, African land-locked states may be divided into three groups:

- Those which have a direct railway connexion with an ocean port (Malawi, Uganda, Upper Volta, Zambia and, with some reservations, Mali);

- Those which must use road transport to reach a railway terminus (Chad, Niger and Rwanda); and

- Those which use river or lake transport to reach a railway terminus (Burundi and Central African Republic).

89. The relative distance covered by each mode of transport in a transit haul is important because of the differences in the average rates of one mode as against another:

TABLE 5

Average rates on different modes of transport

in US cents per ton-km

	For export goods	For import goods	Average
River	1.2	1.7	1.5
Rail	1.5	2.2	1.9
Lake	3.4	3.9	3.7
Road	4.0	5.0	4.7
Total:	1.6	2.4	2.0
Source: Annex VII			

90. By and large, these variations are due to the internal economies of each mode of transport, but in some cases they are the result of tariff policy of the carriers.

91. The other important cause that determines the cost of transit is the proportionate length of road transportation to the total transit distance. Out of ten African land-locked states, five States depend totally or partially on the haulage of their external trade goods by road to and from railway termini.

TABLE 6

Road haulage on the transit routes of African land-locked states

	Average distance covered by road transport	Volume carried by road in million ton-km	% of the total volume of transit traffic	Average rate in \$ per ton-km
1. CAR	680	3.4	2	5.7
2. Chad	640	69.8	28	5.0
3. Mali*	100	19.5	13	4.8
4. Niger	270	40.6	26	3.3
5. Rwanda	250	11.3	15	8.0
Total:	-	144.6	-	4.7

\* Figures refer to 1962, when relations with Senegal were ruptured and all the external trade of Mali went through the Ivory Coast.

Source: Annex VI-b, c, e, f and g.

92. Table 6 shows that the terms of transportation by road are the major cause for the high average rates for Chad, Mali, Niger and Rwanda, for about one-fourth of their transit traffic went by road transport in 1962.

93. In most cases the determining factor for the terms of transit is the tariff policy of the transport companies (or the State).

94. The most evident cases in this respect are:

(i) The service on the Lake Tanganyika route between Bujumbura and Kigoma is a monopoly of the Belgian Compagnie des chemins de fer du Congo supérieur aux grands lacs africains (CFL).

The company does not publish in its annual reports any particulars of the revenue and expenses of its lake services.

But the rates applied by the CFL for its lake services are much higher than the rates charged by the East African

Railways and Harbours on the same lake (between Kigoma and Mpulungu).<sup>1/</sup> Some idea of the high rate charged by the CFL

on the lake may be gained from the analyses of the prime costs of lake transport, carried out in 1950 by the Belgian Ministry of Colonies. According to their estimates, the prime cost of transportation on Lake Tanganyika was about fr 0.5 per ton-km

(1.0 ø).<sup>2/</sup> Even assuming a doubling of costs since 1950, the prime cost of transportation would not exceed 2.0 ø per ton-km, as against 3.7 ø actually charged by CFL.

(ii) Services on the rail route from Malawi to Beira were provided by the British-owned railway companies: Malawi Railways Ltd., Central African Railways Co. Ltd., and Trans-Zambia Railway Co. Ltd. These companies charge very high rates (4.7 ø per ton-km), though their trading results are quite satisfactory [the operating ratio (of expenses to revenue) was about 77 per cent in 1961 to 78 per cent in 1962].<sup>3/</sup>

<sup>1/</sup> According to the Annual Report of the E.A.R. & H. for 1962 the average revenue for 1 ton-km on its lake services was 1.68 ø and these services still brought about US\$ 0.5 million of profit.

<sup>2/</sup> Plan décennal pour le développement économique et social du Ruanda-Urundi, 1951, p.210.

<sup>3/</sup> Federation of Rhodesia and Nyasaland Economic Report, 1963, p.91 and Annual Accounts, Nyasaland Railways.

(iii) The railage of copper from Zambia to the Mozambique ports of Beira and Lorenzo Marquês costs about 1.88 ¢ per ton-km. Railage of copper at this high rate brings in about 30 per cent of the Rhodesia Railways receipts, although it represents only about 18 per cent of the total traffic.<sup>1/</sup> The railage of copper from Ndola to Beira is charged at a special rate and costs about \$46 per metric ton. The railage of copper between these two places would cost only \$10 if the general rates of the Mineral Tariff were applied.<sup>2/</sup>

95. Again, in some cases the level of rates on transit routes depends on the regulations prescribed by the State for the private or State transport organizations.

96. In West Africa there is an inter-State Organisation commune Dahomey-Niger des chemins de fer et des transports (OCDN), which organizes the transportation of the external trade goods of Niger through Dahomey. Therefore, the rate for road haulage of goods to and from the railway terminus at Parakou in Dahomey is fixed at the same level for both the east and west of Niger, notwithstanding the great difference in distance from these regions to Parakou. The actual costs of the transporters are paid from a special fund, maintained by the two States. Such a procedure reduces the cost of transit from east Niger, which is the main ground-nut producing area, by nearly 20 per cent.

97. The difficult situation which arose in Mali in 1961 after the rupture of economic relations with Senegal induced the Mali Government to take special measures to keep the cost of haulage stable. According to Article 1 of the Decree of 22 March 1963, the rate for haulage of export goods was fixed at fr CFA 6.64 (2.7 ¢) per ton-km as against fr CFA 13.28 (5.4 ¢) per ton-km for haulage of goods by road inside Mali.

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<sup>1/</sup> 13th Annual Report, Rhodesia Railways, pp.13, 50 and 77.

<sup>2/</sup> Official Railway Tariff Book No.29, Rhodesia Railways, Clause 249.

98. In East Africa there is an example of another kind of public control over matters of transport costs. The East African Railways and Harbours, as a part of the East African Common Service Organization, was established as a non-profit public organization, and to implement such a principle, it was agreed that any annual profit acquired by it should be used for reducing the rates charged to the public. The last reduction took place in 1960, for owing to many circumstances (rapid expansion of the network, natural disasters, etc.), the EAR & H has had no profit substantial enough to effect reduction of rates.

(b) Terms of transit for main commodities

99. Land-locked countries are generally at some disadvantage since they cannot participate on equal terms with other countries in international trade in the world market. The cost of transit to and from the ocean ports is always an additional burden that raises the prices of goods, however favourable the terms of transit might be.

100. The following examples may be mentioned for the purpose of illustration:

- (i) In Niger, 1 kg of its main export crop, ground-nuts, can buy only 1 kg of cement; whereas in Senegal, 1 kg of ground-nuts can buy 3 kg of cement;
- (ii) For such land-locked countries as Burundi, Rwanda and Chad, which have no direct railway connexion with the coast, the cost of motor spirit is more than \$ 100 per ton, whereas for coastal states it is about \$40.

101. In order to assess better the relative position of each land-locked country, comparison should be made separately for export commodities and imported goods and, whenever possible, on the basis of the same commodity.

102. As Table 2 shows, the lack of diversification of the export trade leads many countries to depend on one commodity: coffee, cotton, ground-nuts, or ores and makes it possible to analyse the costs of transit for a commodity common to many land-locked countries. Imports are more diversified and it is difficult to choose any commodity as typical. The best choice seems to be petroleum products and cement, which though of low value represent a substantial part of tonnage and are common to all land-locked states.

TABLE 7

Relative importance of different commodities in the external trade of  
land-locked countries in 1962

	Value in million US dollars	% of total transit trade	Volume in '000 metric tons	Cost of 1 ton (\$)	Cost of transit of 1 ton (\$)	Percentage of transit expenses to export value
(a) <u>Export</u>						
1. Coffee	71.2	13	160	445	21	5
2. Cotton	41.0	8	65	630	26	4
3. Ground- nuts	25.8	5	154	167	16	10
4. Orés	316.3	59	540	590	29	5
TOTAL:	454.3	85	919	-	-	-
(b) <u>Import</u>						
1. Petro- leum products	25.6	7	528	44	30	68
2. Cement	3.7	1	121	30	20	67
TOTAL:	29.3	8	649	-	-	-
<u>Source:</u> Annexes II, V and VI.						

103. The four export commodities represent 85 per cent of the total value of exports of the ten land-locked countries and about 70 per cent of the total volume of export (by weight). The figures for import are only 8 per cent by value, but 45 per cent by weight. Therefore the analysis of the terms of transit of these goods may be considered as representative of the total external trade of these countries.

104. Table 7 reveals that in general the cost of transit does not exceed 4-5 per cent of the value of the exported commodity and only in the case of ground-nuts, which are of a low value, does it exceed 10 per cent, in spite of the fact that the terms of transit for ground-nuts are usually more favourable than for other commodities. But the cost of transit is more than 50 per cent of the value of the above-mentioned import goods.

105. The cost analyses of the terms of transit for each of these commodities follow:

(i) Terms of transit for coffee

106. Coffee is the main agricultural export commodity of the following countries:

TABLE 8

Relative terms of transit for coffee in 1962

	Volume carried in '000 metric tons	Cost of transit of 1 ton in \$	Rate per 1 ton-km in ø			
			on the total route	of which on		
				rail	road	lake river
1. Burundi	14	22	1.6	1.1	-	3.7
2. CAR	8	30	1.7	2.2	-	1.5
3. Rwanda	10	42	2.6	-	-	-
a) via Mombasa	1	39	2.4	1.2	5.6	-
b) via Dar-es-Salaam	9	43	2.6	1.1	15.	3.7
4. Uganda	128	19	1.8	1.8	-	-

Source: Annexes VI - a, b, g, h.

107. The relative difference in cost of transit of 1 ton, which varies between \$19 and \$43, may be explained partly by the natural difference in distance to the coast, thus lying outside of economic factors, and partly by the terms prevailing on transit routes. Thus the elimination of the influence of distance shows that the difference in costs per ton-km is not as high (between 1.6 ¢ and 2.6 ¢) as for the cost of transit calculated per ton.

108. The following conclusions may be derived from Table 8:

(i) East African Railways and Harbours, which provide railway services for Burundi, Rwanda and Uganda, carry the coffee exports of Burundi and Rwanda at rates some 12 per cent lower than coffee exported from Uganda, as Rwanda-Burundi enjoy special "in transit" rates (see para 183).

(ii) There is a very substantial difference in rates applied to the export of coffee from Rwanda on Ugandan roads (5.6 ¢ per ton-km) and on Burundi roads (15.0 ¢ per ton-km). According to the analysis of high rates on Burundi and Rwandese roads made by a UN expert at the end of 1962,<sup>1/</sup> the reasons for this were the rise of internal prices in Rwanda and Burundi since 1960 by nearly 2 times and restrictions on the export of new cars and spare parts, which increased the exploitation costs of transport enterprises. A comparison of exploitation costs in Rwanda with those in Uganda shows that the rates on roads reflect the respective operating costs (in ¢ per ton-km):

	<u>Uganda</u>	<u>Rwanda</u>
Fuel	11.3	1.0
Spare parts and depreciation	1.9	9.1
Drivers' wages	0.4	2.4
Other	1.4	2.2
	<u>5.0</u>	<u>14.7</u>

<sup>1/</sup> See L'économie des transports au Rwanda et au Burundi en 1962, by Antoine.

(iii) The rate on Lake Tanganyika (3.7 ¢) is nearly three times more than the rate on the River Congo (1.3 ¢), due mainly to the special position of the Compagnie des chemins de fer du Congo supérieur aux grands lacs africains" (CFL) on the Bujumbura - Kigoma route (see para 94(i)).

(ii) Terms of transit for cotton

109. Cotton is the most common export commodity for African land-locked countries:

TABLE 9

Relative terms of transit for cotton in 1962

	Volume carried in '000 metric tons	Cost of transit of 1 ton in \$	on the total route	Rate per 1 ton-km in ¢		
				of which on		
				rail	road	lake/river
1. Burundi	2	23	1.5	1.1	-	4.0
2. CAR	8	22	1.3	1.7	-	1.1
3. Chad	20	45	2.2	-	-	-
a) via Lagos	2	55	2.7	2.5	2.9	2.1
b) via Burutu	7	43	2.7	-	4.4	2.6
c) via Pointe Noire	11	44	1.9	1.4	5.7	0.6
4. Mali	2	14	1.9	1.8	2.7	-
5. Uganda	33	15	1.4	1.4	-	-

Source: Annex V - a, b, c, e, h.

110. The two main producers of cotton among African land-locked countries - Chad and Uganda (53,000 tons out of 65,000 tons) - have quite different terms of transit: rather favourable for Uganda (1.4 ¢ per ton-km) and most unfavourable for Chad (about 2.2 ¢ on the average per ton-km). In respect of Uganda, the answer is quite clear - Uganda has a direct railway connexion with the Kenya port of Mombasa and the transit is adequately served by East African Railways and Harbours. In respect of Chad many reasons influence the terms of transit. The paradox of the situation is that the longest route via Pointe Noire through two countries - CAR and Congo (Brazzaville) - covering a distance of 2,290 km is at the same time the cheapest outlet for Chadian Cotton. The reason for it lies in the fact that the "Agence Transéquatoriale des Communications" which serves this route, provides preferential terms of transit for Chad export. (For details, see paras 159-162). But in spite of this, the average rate per 1 ton-km is as high as 2.2 ¢, due mainly to the large part of road haulage (about 410 km) in the total transit distance.

111. The rates on roads is nearly 5 ¢ per ton-km, which is usual for most transit countries. In the case of Mali the rate is as low as 2.7 ¢, due to the special measures taken by the authorities of Mali.

112. The rates on Lake Tanganyika charged by the Belgian Compagnie des chemins de fer du Congo supérieur aux grands lacs africains are much higher than the general level (4.0 ¢ per ton-km as compared with 1-2 ¢ on other water routes), because the rates are not justified by any economic calculation.

113. The railway rates per ton-km applied by different railway companies for railage of cotton are as follows:<sup>1/</sup>

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<sup>1/</sup> See Inland Transport in the West African Sub-Region, E/CN.14/TRANS/17.

<u>In ¢</u>		
	<u>Average rate</u>	<u>Rate for cotton</u>
1) East African Railways and Harbours:		
a) For Burundi	1.6	1.1
b) For Uganda	1.6	1.4
2) Chemin de Fer Congo-Océan		
a) For Chad	2.2	1.4
b) For CAR	2.2	1.6
3) Nigerian Railways		
a) For Chad	1.7	2.5
4) <u>Régie du chemin de fer</u> Abidjan-Niger		
a) For Mali	2.8	1.8

114. The above table shows that these ton-km rates, for the same commodity, differ from place to place. This shows that they are rather the results of tariff policies, than an outcome of any economically justified calculations.

(iii) Terms of transit for ground-nuts

115. Ground-nuts are the main export commodity for Mali and Niger, and some quantities are also exported from the CAR, Malawi, the Upper Volta and Zambia.

TABLE 10

Relative terms of transit of ground-nuts in 1962

	Volume carried in '000 metric tons	Cost of transit of 1 ton in \$	Rate per ton-km in ø			
			Average on the total route	of which on		
				rail	road	river
1. CAR	2	19	1.1	2.0	-	0.7
2. Malawi	18	4	1.1	1.1	-	-
3. Mali	41	12	1.5	1.3	2.7	-
4. Niger	70	24	2.2	-	-	-
a) via Dahomey	30	18	2.4	2.4	2.4	-
b) via Nigeria	40	28	2.1	1.9	2.9	-
5. Uganda	7	10	0.8	0.8	-	-
6. Upper Volta	1	8	1.3	1.3	-	-
7. Zambia	15	8	0.5	0.5	-	-

Source: Annexes b, d, e, f, h, i, j.

116. The terms of transit of ground-nuts are rather favourable for the CAR, Uganda, the Upper Volta and Zambia, where ground-nuts constitute only 1-2 per cent of exports, because the transit countries try to attract ground-nuts as an additional source of traffic and can do this only by providing special concessions. The same applies to Malawi, where ground-nuts provide about 10 per cent of exports.

117. In Mali, where ground-nuts represent more than 80 per cent of total exports, the terms of transit in 1962 were not very favourable because of rupture of good transit connexions through Senegal and the necessity to haul exports by road and rail through the Upper Volta and the Ivory Coast.

118. In Niger, where ground-nuts are also the main export commodity, the terms of transit are determined by the conditions created by the special inter-State Organisation commune Dahomey-Niger and the rates, shown in Table 10, are the average rates for the whole route, irrespective of the mode of transport (see para.176).

(iv) Terms of transit for ores

119. The average terms of transit for ores, as shown in Table 7, are determined by the terms of transit for copper from Zambia, because copper provides 520,000 tons out of a total of 540,000 tons of ores.

120. The terms of transit for each country are as follows:

TABLE 11

Relative terms of transit of ores in 1962

	Volume carried in '000 metric tons	Cost of transit of 1 ton in \$	Rate per ton-km in ¢			
			on the total route	of which on		
				rail	road	lake
1. Rwanda	4	44	2.7	1.3	11.0	3.7
2. Uganda	16	11	1.1	1.1	-	-
3. Zambia	520	28	1.8	1.8	-	-

Source: Annex VI - g, h, j.

121. The comparative terms of transit indicate clearly the rather unfavourable conditions provided by Rhodesia Railways for Zambia as compared with the conditions on the East African Railway for Uganda (1.8 ¢ and 1.1 ¢ per ton-km respectively). The rates on the Rhodesia Railways are rather high (1.8 US cent) in spite of special rebate afforded to the railage of copper from Copper Belt to the frontier on Mozambique (see para 201).

(v) Terms of transit for petroleum products

122. The imports of petroleum products can be traced in each African land-locked country.

TABLE 12

Relative terms of transit for petroleum products in 1962

	Volume carried in '000 metric tons	Cost of transit of 1 ton in \$	Rates per ton-km in ø			
			Average on the total route	of which on		
				rail	road	lake/river
1. Burundi	17	47	3.1	3.0	-	4.1
2. CAR	26	28	1.6	1.1	-	1.8
3. Chad	38	74	3.5	-	-	-
a) via Lagos	25	77	3.8	2.8	5.2	-
b) via Pointe-Noire	13	68	3.0	1.1	8.2	1.6
4. Malawi	29	21	5.8	5.8	-	-
5. Mali	52	26	3.3	3.0	5.4	-
6. Niger	21	32	4.2	4.2	4.2	-
7. Rwanda	14	62	3.8	-	-	-
a) via Mombasa	10	61	3.7	3.0	5.6	-
b) via Dar-es-Salaam	4	66	4.1	2.9	15.0	4.1
8. Uganda	153	25	2.3	2.3	-	-
9. Upper Volta	30	16	2.5	2.5	-	-
10. Zambia	148	27	1.7	1.7	-	-
<u>Source:</u> Annex VI						

123. The additional expenses which the land-locked countries pay for transit of their petroleum products, are between \$ 16 and \$ 74 per ton, depending on the transit distance and terms of haulage.

124. The two main reasons influencing the relative costs of transit of petroleum products are:

- (a) The use of road transport at rates between 4 ¢ and 15 ¢ per ton-km;
- (b) Rather inconsistent rates on different railways for railage of petroleum products.

125. The reasons for high costs on roads are the same as for the transportation of export commodities and were dealt with at some length in paragraph 91. The reasons for the relative level of rates for railage of petroleum products on the different African railways require a few comments.

126. The rates on railways per ton-km for petroleum products are as follows:

1. <u>Le chemin de fer Congo-Océan</u>	1.11* ¢
2. Rhodesia Railways	1.29
3. East African Railways and Harbours (average)	2.48
4. Nigerian Railways	2.83
5. <u>Régie du chemin de fer Abidjan-Niger (average)</u>	2.83
6. Mozambique Railways	2.90
7. <u>Régie du chemin de fer du Dahomey</u>	4.16

\* Special rate. The general rate is 1.60 ¢.

127. The above list of rates shows that on the average the rate for petroleum products is about 2.5 ¢ per ton-km. This rate is rather high, as it includes the cost of return of empty tank-cars to the ocean ports.

(vi) Terms of transit for cement

128. Cement is imported not by all land-locked countries, but it is imported in large quantities by seven land-locked countries.

TABLE 13

Relative terms of transit for cement in 1962

	Volume carried in '000 metric tons	Cost of transit of 1 ton in \$	Rate per ton-km in ø			
			on the total route	of which on		
				rail	road	water
1. Burundi	7	17	1.1	0.9	-	2.8
2. CAR	22	31	1.7	2.1	-	1.6
3. Chad	20	55	2.6	1.5	4.5	1.6
4. Mali	26	20	2.7	2.2	5.4	-
5. Niger	17	17	2.3	2.3	2.3	-
6. Rwanda	2	37	2.3	0.9	15.0	2.8
7. Upper Volta	27	11	1.8	1.8	-	-
<u>Source:</u> Annex VI: a, b, c, e, f, g, i.						

129. The average cost of transit for cement lies between 1 ø and 2.5 ø per ton-km and the only thing which is worth mentioning is the relatively low special rate charged by East African Railways for the transit of cement to Burundi and Rwanda.

(c) General picture

130. Now, since all the particular cases and reasons which influence the costs of transit have more or less been shown, we may make some general conclusions about the relative position of each African land-locked country.

131. As the over-all determinant we may use the total cost of transit attributed to the value of external trade goods.

TABLE 14  
Percentage of total cost of transit to the value of external trade goods

	for export	for import
1. Countries with a direct railway connexion to the coast:		
1. Malawi	2.1	3.4
2. Upper Volta	2.8	6.2
3. Uganda	3.8	15.4
4. Zambia	5.4	7.8
2. Countries using water route up to a railway terminus:		
5. Burundi	4.6	9.3
6. CAR	5.0	9.7
3. Countries using road route up to a railway terminus:		
7. Rwanda	6.3	16.6
8. Chad	8.8	21.1
9. Niger	15.8	9.6
10. Mali (in 1962)	6.5	9.6
	average 5.1	10.8
Source: Annexes II and IV		

132. As an average the cost of transit for export is 5 per cent of the value and that for import 11 per cent. Only in Niger is the percentage for import goods lower than for export goods. The reasons for this are the low cost of Niger exports, which consist mainly of ground-nuts, and the small difference between the rates for export and import commodities, due to the policy of the Nigerian Railways (see para.160). The rather high percentage of transit costs for Ugandan imports is mainly due to the rate for petroleum products on East African Railways.

133. But whatever the reasons, the percentage of transit costs to the value of external trade goods represents:

- (a) For export goods - a deduction from the land-locked country's export receipts in favour of the transit country;
- (b) For import goods - an additional charge paid by the people of the land-locked country.

# CHAPTER IV

## CO-OPERATION BETWEEN LAND-LOCKED AND TRANSIT COUNTRIES

### (a) Economic justification for discounts on transit routes

134. The pattern of traffic in Africa still bears all the signs of the pre-independence period, namely that the main bulk of all traffic goes between the ocean ports and the interior. Under these circumstances, the transit traffic just pours into the main transport stream of the transit countries and creates additional supply for the carriers, thus raising the utilization of their capacity and their profitability.

135. Table 15 shows that the greater part of transit traffic goes by rail (89 per cent).

TABLE 15

The role of different modes of transport in the transit traffic of African land-locked states

in million ton-km

	Total traffic	of which					
		by rail		by road		by river/lake	
		traffic	%	traffic	%	traffic	%
Export	1,733	1,624	94	39	2	70	4
Import	1,702	1,439	85	106	6	157	9
Total:	3,435	3,063	89	145	4	227	7
Source: Annexes IV and VII - a, b, c.							

136. An example of advantages a railway gets if it has a transit traffic may be shown from the experience of two West African railways, serving the transit traffic of Mali: Abidjan-Niger and Dakar-Niger railways.

137. It is known, that from 1961 all the external trade of Mali was diverted from Dakar to Abidjan. Consequently, the goods traffic on the Abidjan-Niger railway rose from 207 million ton-km in 1960 to 326 million ton-km in 1961, of which 85 million ton-km could be attributed to the Mali traffic.<sup>1/</sup> But after 1963 it was expected that some part of the Mali traffic would again be routed via Dakar, (adding about 86 million ton-km to the traffic on the Dakar-Niger railway).<sup>2/</sup>

138. Subsequently, these railways showed the following changes in their financial reports:

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<sup>1/</sup> Ministère des finances, des affaires économiques et du plan, Situation économique de la Côte-d'Ivoire, 1961, pp.41-42.

<sup>2/</sup> Régie des chemins de fer du Sénégal. Budget d'exploitation. Exercice 1963-1964. Ministère des travaux publics et des transports. p.7.

TABLE 16

Changes in the financial results of railways attributable to the changes  
in transit traffic

	Abidjan-Niger railway <sup>1/</sup>			Dakar-Niger railway <sup>2/</sup>		
	without transit traffic (1960)	with transit traffic (1961)	Growth	without transit traffic (1962/ 1963)	with transit traffic 1963/ 1964	Growth
1. Traffic in million ton-km units (TK + $\frac{VK}{3}$ ) <sup>a)</sup>	287	445	158 (36%)	255	391	136 (35%)
2. Exploitation ex- penses (without amortization) in million US dollars	8.0	8.5	0.5 (6%)	8.7	9.4	0.7 (7%)
3. Receipts without donations in mil- lion US dollars	9.5	14.3	4.8 (34%)	6.4	9.1	2.7 (30%)
4. Average rate per unit of ton-km in US cents	3.3	3.2		2.5	2.3	
a) TK-ton-km; VK-voyageur-km						

1/ Régie du chemin de fer Abidjan-Niger. Compte rendu de gestion, Année 1962, pp. 21 & 23, and Ministère des finances, des affaires économiques et du plan, Situation économique de la Côte d'Ivoire, 1961, p.41.

2/ Régie des chemins de fer du Sénégal, Budget d'exploitation. Exercice 1963-1964. Ministère des travaux publics et des transports, p.10 and table A-a.

139. So, it is quite evident that the increase in traffic by 35 per cent generates an increase of receipts by 30 per cent while the expenses rise by only 6 per cent.

140. The absence of any change in the average rates indicates that the above-mentioned changes in the financial results were due entirely to the volume of transit traffic.

141. The above-mentioned examples show where the stable economic basis for the co-operation between the land-locked and transit countries lies. It also reveals the ground for economically justified reduction of rates for transit traffic, which is always cheaper to handle for a railway.

142. The economic benefits to the transit country derived from the transit traffic and international feeling of understanding for the disadvantageous position of land-locked countries led in many cases to the provision of special concessions to them.

(b) Cases of co-operation among African land-locked and transit countries

143. It is to the advantage of African land-locked states that in majority of cases, they are granted some kind of discount for their transit traffic.

144. In the majority of cases the discount is granted for the main export commodity of the land-locked country and in some cases there are special "in transit" rates for the majority of goods transited through a particular country. In the main, the discount is granted by railways, except in the case of the down-stream traffic on the Oubangui and Congo rivers where discount is granted by the Agence trans-equatoriale des communications.

145. The particulars of special rights granted to each land-locked country in Africa are given below:

TABLE 17

Discount from general rates afforded for the transit traffic of African  
land-locked states

	Export		Import	
	Discount in '000 \$	% of the total cost	Discount in '000 \$	% of the total cost
1. Burundi	114	26	110	5
2. CAR	42	6	72	3
3. Chad	220	20	447	8
4. Malawi	7	1	-	-
5. Mali	61	11	85	3
6. Niger	517	27	635	32
7. Rwanda	85	14	28	2
8. Uganda	147	4	170	2
9. Upper Volta	70	95	200	11
10. Zambia	-	-	-	-
<u>Source:</u> Annexes IV and VII.				

(1) Burundi

146. The total volume of Burundi external trade now goes through Tanzania and is railed between the lake port of Kigoma on Lake Tanganyika and ocean port of Dar-es-Salaam. The railage is performed by East African Railways and Harbours, which provides specially favourable terms for Burundi transit.

147. Table 18 shows that the discount on the average is about 12.4 per cent of the total cost of transit and is much higher for export (39 per cent), as the main import commodity (petroleum products) enjoys no discount.

TABLE 18

Discount granted to Burundi external trade on the transit route through  
Tanzania

Port to which cargo is sent	Volume carried (1962) in '000 metric tons	Cost of transit of 1 ton in \$		Total cost of transit at the special rate in '000 \$	Discount from general rates in '000 \$
		at special "in transit" rates 1/	at general rates		
<b>Export</b>					
1. Coffee	14	14.4	21.7	207	104
2. Cotton	2	14.4	17.1	32	6
3. Other	6	9.2	10.0	55	4
Total:	22			294	114.8
<b>Import</b>					
1. Petroleum products	17	38.1	38.1	659	-
2. Expensive goods	3	40.8	40.8	116	-
3. Other	46	16.0	18.4	736	110
Total:	66			1,511	110
<b>GRAND TOTAL:</b>	<b>88</b>			<b>1,805</b>	<b>224</b>

1/ East African Railways and Harbours. Tariff book No. 3. Part III. Rates, Fares, and charges. Clause 346.

1/ East African Railways and Harbours. Tariff book No. 3. Part II. Rates, Fares, and charges. Clause 346.

148. These special "Congo and Ruanda-Urundi in-transit rates" are applicable for the transit between former Belbase in Dar-es-Salaam and Kigoma and stem from old transit agreements between Great Britain and Belgium.

(ii) CAR

149. The bulk of CAR external trade goes from Bangui via Brazzaville to the ocean port of Pointe Noire. (Out of 95,000 tons only about 5,000 tons is transited via Douala in Cameroon).

150. The transit of the CAR enjoys some special concessions on the river and rail parts of the route through the Congo (Brazzaville).

TABLE 19

Discount granted to CAR external trade on the transit route through  
Congo (Brazzaville)

	Volume carried in '000 metric tons	Cost of transit of 1 ton in \$		Total cost of transit at the special rates in '000 \$	Discount from general rates in \$
		at special rates	at general rates		
<u>Export</u> <sup>1/</sup>					
1. Cotton	8.3	22.3	27.3	185	42
<u>Import</u> <sup>2/</sup>					
1. Petroleum pro- ducts	26.4	28.0	30.8	739	72
Total				924	114
<p>1/ Compagnie Générale de Transports en Afrique Equatoriale, <u>Tarifs passagers et marchandises</u>, Art.102; Art. 72-B.</p> <p>2/ <u>Bulletin des statistiques générales de l'Union douanière équatoriale</u>. No.3, juillet 1963, pp.22-23.</p>					

151. This discount represents about 3.4 per cent of the total cost of transit and refers to:

	<u>'000 \$</u>	
	<u>River</u>	<u>Rail</u>
1. Cotton	26	16
2. Petroleum products	-	72
Total:	26	88

152. Apart from any other reasons, the discount for exports may be attributed to the fact that the traffic on this route is very imbalanced, the down-traffic (export) being about half of the up-traffic.

153. The discount on petroleum products on the Congo-Océan railway is granted to the petroleum companies under so-called "conventions".

(iii) Chad

154. Chad uses three transit routes for its external trade: the average cost of transit (that is, to or from the frontier of Chad) on each of them being as follows:

	<u>in \$ per ton</u>	
	<u>export</u>	<u>import</u>
1. Nigerian route via Lagos	55	67
2. Benue route via Burutu	43	43
3. Federal route via Pointe Noire	42	67

155. On two of these routes (via Lagos and via Pointe Noire), which are competitive to some extent, Chad gets discounts purported mainly to attract the traffic from other possible transit routes, as each of them has its advantages and disadvantages and the volume of discount serves the purpose of striking a balance between them. Thus, each route is fitted to serve best the particular kind of traffic to or from the different areas of Chad.

TABLE 20

The reasons for discount on transit routes of Chad

	Unit	via Lagos	via Burutu	via Pointe Noire
<u>For export of cotton</u>				
1. Transit distance from cotton area inside Chad	km	2,400	1,900	2,500
2. Cost of transit without discount	US \$ per 1 ton	106	56	68
3. Discount	id.	35	-	12
4. Cost of transit with discount	"	71	56	56
5. Volume carried	'000 tons	2	7	11
<u>For import of petroleum products</u>				
1. Transit distance to places of consumption inside Chad	km	2,030	-	2,500
2. Cost of transit without discount	US \$ per 1 ton	86	-	90
3. Discount	id.	9	-	5
4. Cost of transit with discount	"	77	-	85
5. Volume carried	'000 tons	25	-	13

156. Table 20 shows that the cheapest route for the evacuation of cotton from the cotton-growing area (around Moundou) is the route by the River Benue via Burutu in Nigeria (\$ 56 per ton without any discount). But this route has two disadvantages.

157. The Benue is navigable up to Garoua only 2 months a year and the river-ocean port of Burutu is off the usual maritime routes, which raises the expenses for the evacuation of cotton. That is why the discount on the Bangui route, which equals the costs, easily diverts the evacuation of cotton (11,500 tons out of total 20,200 tons) towards the port of Pointe Noire and provides additional down-traffic for the Agence trans-équatoriale des communications".

158. The amount of discounts for the importation of petroleum products on two transit routes (Nigerian route and the route via Bangui) may be attributed to two quite different reasons.

159. First of all, the volume of petroleum products carried on each route depends on the consumption in the two separate regions of Chad: Fort Lamy and the north of Chad respectively, and the regions in the south around Moundou and Fort Archambault. Due to the bad state of roads inside Chad, communications between these two regions are rather expensive; the volume of traffic is, therefore, insignificant.

160. The second reason for the different rates of discount on the Nigerian route (\$ 9) and the Bangui route (\$ 5) is that Nigerian Railways adhere to the policy of keeping rates for import commodities, railed to Niger and Chad, on a low level so as to attract the upward transit traffic. The attitude of the transport companies, which provide services on the so-called federal route via Bangui, is on the contrary, to apply rates for the up-stream traffic as high as the particular commodity can bear.

161. In general, the result of concessions enjoyed by the external trade of Chad on the transit routes is as follows:

TABLE 21

Discount afforded to Chad external trade on transit routes to the ocean

	Volume carried (1962) in '000 metric tons	Cost of transit of 1 ton in \$		Total cost of transit at special rates in '000 \$	Discount from general rates in '000 \$
		at special rates	at special rates		
<u>Export</u>					
1. Cotton	20	45	56	904	219
<u>Import</u>					
1. Petroleum products	38	74	82	2,834	279
2. Other	51	60	63	3,043	160
Total:	89			5,877	658
<u>Source:</u> Annex VI-c					

162. Thus, the total volume of discount amounts to 8 per cent, the main part of which is for imports on Nigerian Railways.

163. If in the future the Jos-Maiduguri railway line is extended to Fort-Lamy (250 km), it will provide a direct railway outlet for Chad and will greatly increase the possibilities for the development of the north part of Chad. But unless Chad takes strong measures to improve the conditions of roads between Fort-Lamy and the agricultural regions in the south of the country, such a railway extension may not change the pattern of Chad external trade and its transit outlets.

164. The beginning of construction works on the first part of the trans-Cameroonian railway from Yaoundé to Belabo (603 km) marks another important step towards the future improvement of the land-locked position of Chad, as this trans-Cameroonian railway may reach eventually as far inside Africa as Moundou and Fort Archambault in Chad, creating another transit outlet (the shortest one) for the external trade of Chad.

165. Thus if previously Chad was bound to the only one possible outlet via Bangui to Pointe Noire (more than 2,400 km long), it now has an alternative outlet via Maiduguri in Nigeria and is likely to receive in the future a new outlet via Cameroon, the shortest of the three (about 1,500 km).

(iv) Malawi

166. The comparison of rates charged by the British owned railways, serving the Malawi transit to Beira with rates on the Rhodesia railways, serving Zambia transit to Beira, shows that Malawi pays a very high price for its transit, and has practically no discount. The only case of a small discount is the cost of transit for Malawi ground-nuts, which are the main bulk export of Malawi and, being a rather cheap commodity, could not otherwise gain access to the world market.

167. The amount of this discount is rather small (about \$7,000 in 1962) and this is outweighed many times by higher rates on other export commodities (the transit of each ton of tobacco, for example, costs \$4 more than it would at the Rhodesia railways rates).

168. The prospects for Malawi lie in its possibility of linking up with the future railway connexion between Zambia and Tanzania or of changing its relations with the transit railways.

(v) Mali

169. There is some difficulty in presenting the case of Mali, as in 1962 - the basic year for this study - the conditions of transit for Mali were poor owing to the closing of its natural outlet via Dakar as a result of

the rupture of the relations with Senegal. In 1962 Mali got a small discount on the Abidjan-Niger railway amounting to \$146,000, including \$53,000 in respect of ground-nuts.<sup>1/</sup>

170. So it may only be stated here that since 1964 Mali has again enjoyed the normal facilities of the Dakar-Niger railway for the transportation of its external trade commodities. According to the Railway Convention of 8 July 1963 on the resumption of direct railway traffic between Senegal and Mali, the tariffs for Mali traffic will be those that were in force before the rupture of relations, until new international tariffs are established.

171. That is why the future terms of transit for Mali should be determined with a view to the possibility of keeping open alternative routes to the ocean - via Dakar and via Abidjan - and to negotiate preferential terms on both of these routes, corresponding to the benefits derived by those railways from Mali transit traffic (see Table 16).

(vi) Niger

172. Niger participates in the long-established (since 1954-1955)<sup>2/</sup> scheme for stimulating its export by equalizing the transport expenses on the transit route via Dahomey and via Nigeria (Opération hirondelle).

173. In 1962, the distribution of Niger external trade between these two routes was as follows:

<sup>1/</sup> Annex VI - e.

<sup>2/</sup> Europe - France Outremer, juillet-août 1965 No.426-427 p.57.

TABLE 22

Cost of haulage through two main outlets of Niger towards the Ocean (1962)

	Volume carried in '000 metric tons		Total cost of haulage in '000 \$*		Cost of haulage of 1 ton in \$*	
	via Dahomey	via Nigeria	via Dahomey	via Nigeria	via Dahomey	via Nigeria
<u>Niger-Est</u> <u>(Maradi)</u>						
Export	24	47	843	1,574	35	34
Import	15	20	487	586	32	29
<u>Niger-Ouest</u> <u>(Niamey)</u>						
Export	8	-	207	-	26	-
Import	34	-	1,313	-	39	-
* Including costs inside Niger						

174. Two main conclusions may be drawn from Table 22:

- (a) The cost of transportation for exports from Niger-Est is fully equalized (by means of the so called Opération hirondelle) via Dahomey (\$35) and via Nigeria (\$34).
- (b) The cost of transportation for imports to Niger-Est is to the advantage of the Nigerian route (\$29) owing to some concessions enjoyed by Niger import goods on the Nigerian Railways.

175. The support for the transit traffic of Niger via Dahomey under the terms of Opération hirondelle may be summarized as follows:

- (i) The territory of Niger is divided into two parts: Niger-Est and Niger-Ouest (the border line goes near Birni N'Konni).

The consignors of each region pay a fixed tariff for the shipment of their goods to or from Cotonou to The Organisation commune Dahomey-Niger. The level of these tariffs for Niger-Ouest corresponds to some extent to the cost of transportation charged by the private hauliers on this route, but those for Niger-Est are calculated so as to compete with the cost on the shorter route via Nigeria.

TABLE 23

Equalization of transit costs on the Niger outlets to the Ocean

in \$ per ton

	Via Dahomey			Via Nigeria
	Charged by hauliers	Donated by OCDN	Paid by consignors	
<u>Niger-Ouest</u>				
1. Export (ground-nuts)	26	1	25	-
2. Import (cement)	36	8	28	-
<u>Niger-Est</u>				
1. Export (ground-nuts)	45	9	36	36
2. Import (cement)	49	22	27	27

- (ii) The difference between the sums paid by the consignors and the actual cost of haulage is covered partly by the tax collected from the growers of ground-nuts (1 franc per kg) and partly from the budget of the joint governmental agency Organisation commune

Dahomey-Niger des chemins de fer et des transports (OCDN), which operates the port of Cotonou, the railway from Cotonou to Parakou and the above-mentioned Opération hirondelle (this donation amounts to \$75,000 annually).

(iii) The truckers on contract with the OCDN are entitled to a return load from Parakou (or to payment if they go back empty) but are not allowed to take their load directly to Cotonou so as to prevent any competition with the railway.

(iv) The Opération hirondelle works during the crop season from 15 November to 15 June each year. But even outside of the season the OCDN hires trucks for the haulage of import goods from Parakou to Niamey.

176. The provisions of the Opération hirondelle lead to the general decrease of the cost of transit. The total volume of discount afforded to the Niger consignors may be seen from the following table.

TABLE 24

Discount granted to Niger external trade on the transit route via Dahomey

	Volume carried (1962) in '000 metric tons	Cost of transit of 1 ton in \$		Total cost of transit at special rates in '000 \$	Discount from general rates in '000 \$
		at special rates	at general rates		
<u>Export</u>					
1. Ground-nuts	30	19	20	560	28
2. Other	2	19	21	27	4
Total:	32			587	32
<u>Import</u>					
1. Petroleum products	21	32	45	668	277
2. Cement	17	17	26	296	154
3. Other	11	22	25	239	63
Total:	49			1,203	494
<u>Source:</u> Annex VI-f					

177. This discount (\$526,000) amounts to 30 per cent and refers to the territory of Dahomey.

178. The Operation hironnelle benefits the economies of both countries as it provides traffic for the railway and port of Dahomey and centralizes road transport facilities for Niger. It also helps to bring the main export crop of Niger - ground-nuts - to the world market, as otherwise the cost of transit via Dahomey would make ground-nuts from Niger-Est uncompetitive in the world market. The other transit route via Nigeria turned out to be unreliable, as the Nigerian railways were too busy with the evacuation of the Nigerian crop of ground-nuts and could not tackle the total volume of Niger ground-nuts because of the congestion on its lines. Niger and Dahomey were members of the same Customs Union of the French West African States and still belong to the same monetary area (CFA franc system). This means that payments for transit may be settled without need for foreign exchange, while transit through Nigeria is to be paid for in foreign currency (sterling).

179. The Nigerian transit route also offers some concessions to Niger traffic.

TABLE 25

Discount afforded to Niger external trade on the transit route via Nigeria

	Volume carried (1962) in '000 metric tons	Cost of transit of 1 ton in \$		Total cost of transit at special rates in '000 \$	Discount from general rates in '000 \$
		at special rates	at general rates		
<u>Export</u>					
1. Ground-nuts	39	28	38	1,104	384
2. Other	8	25	37	197	99
Total:	47			1,301	483
<u>Import</u>					
1. Other	20	24	31	471	141
<u>Source:</u> Annex VI-f					

180. The rather big amount of discount granted to the Niger transit on the Nigerian Railways is due to the fact that this traffic is charged for at long-haul rates, which are much cheaper (per ton-km) than the usual rates. The fact that the up-traffic on the Nigerian Railways is 40 per cent<sup>1/</sup> lower than the down-traffic also has an influence on the cheapness of the rates for import goods.

(vii) Rwanda

181. Rwanda enjoys preferential terms on both its transit routes: through Uganda and Kenya to Mombasa and through Burundi and Tanzania to Dar-es-Salaam. But its very land-locked position (the necessity to go through two transit countries on both outlets) puts Rwanda at a disadvantage in terms of transit compared with some other African land-locked states.

182. The other reason for the disadvantageous position of Rwanda lies in the fact that Rwanda has to use road transport on both transit routes to reach railways termini, but it is a known fact that road transportation is always expensive and it is especially expensive in Rwanda and Burundi.

183. The preferential treatment afforded to Rwanda transit is provided by East African Railways and Harbours, which apply special "in transit rates" for the external trade of Rwanda for carriage to or from Mombasa and Dar-es-Salaam.

184. The discount granted to Rwandese exports amounts to 30 per cent, but there is no discount for Rwandese imports if they are railed via Kampala, as the case was, and not via Kasese.

185. For instance, the railage of 1 ton of salt from Mombasa to the frontier of Rwanda costs (in \$ per ton):

	<u>Via Kampala</u> (at general rate)	<u>Via Kasese</u> (at "in transit" rate)
Rail	16.8	20.4
Road	24.1	16.8
Total:	40.9	37.2

<sup>1/</sup> Stanford Research Institute, California, The Economic Conditions of Transport Development in Nigeria, p.80.

TABLE 26

Discount granted for Rwandese external trade on the railway stretch of the  
Mombasa transit route

	Volume carried (1962) in '000 metric tons	Cost of transit of 1 ton in \$		Total cost of transit in '000 \$	Discount from general rates in '000 \$
		at special rate	at general rate		
<u>Export</u>					
1. Coffee	1	14	21	10	5
2. Others	1	18	21	19	3
Total:	2			29	8
<u>Import</u>	15	-	-	-	-
<u>Source:</u> Annex - g					

186. Thus, it appears that the terms of transit on the Kasese route are more favourable than on the Kampala route: the rate per ton-km to Kasese is ø 1.32, as against ø 1.39 to Kampala, and the distance of the road section of the Kasese route (the more expensive, with an average rate of ø 5.60 per ton-km) is 130 km shorter. Nevertheless, in 1962, practically all the traffic to and from Rwanda went via Kampala, notwithstanding the above advantages granted on the Kasese route to attract some additional traffic to the Kasese-Kampala railway extension.<sup>1/</sup>

187. The reasons for the reluctance of consignors to rail their goods to Kasese, instead of Kampala, may be found in the fact that Kampala affords better facilities for direct rail-road services and that the roads between Kampala and the Rwandese frontier are in better conditions than those between Kasese and the Rwandese frontier.

<sup>1/</sup> This extension is operated on special terms, which provide that the Uganda government covers its deficit, arising mainly out of the obligation to pay out the loans received for its construction.

188. But in future there is a possibility of greater use of the Kasese route if the further shipment may go through a part of Congo (DR) territory - Kasese - Ishasha - Rutshuru - Kisenyi or Bukavu.

189. The other transit route used for Rwandese external trade goes through Burundi, Lake Tanganyika and then by rail to Dar-es-Salaam.

TABLE 27

Discount granted for Rwandese external trade on the railway stretch of the Dar-es-Salaam transit route

	Volume carried (1962) in '000 metric tons	Cost of transit of 1 ton in \$		Total cost of transit in '000 \$	Discount on general rates in \$
		at special rate	at general rate		
<u>Export</u>					
1. Coffee	9	14	21	127	64
2. Other	4	19	16	61	13
<b>Total:</b>	<b>13</b>			<b>188</b>	<b>77</b>
<u>Import</u>					
1. Petroleum products	4	38	38	163	-
2. Other	12	18	20	212	28
<b>Total:</b>	<b>16</b>			<b>375</b>	<b>28</b>
<u>Source:</u> Annex VI-g					

190. The discount granted for Rwandese external trade amounts, on the Dar-es-Salaam transit route, to about 16 per cent of which 30 per cent for exports and 7 per cent for imports.

191. Thus the terms of transit for exports are the same on both routes (via Mombasa and via Dar-es-Salaam), but the imports on the latter route enjoy a small discount, which is not however applied to the main import commodity - petroleum products. It is also not applied to the expensive commodities, which are charged at the rates of higher classes.

192. To obtain better conditions on its new transit routes towards the Indian ocean ports, Rwanda recently concluded transit agreements with Uganda and participated in the multilateral agreement between Tanzania, Kenya, Burundi and Rwanda.

(viii) Uganda

193. The external traffic of Uganda through Kenya enjoys no special discount on East African Railways, but, as was shown previously, the general terms of railage are rather favourable by themselves and do not hamper the free flow of external trade of Uganda towards the world market.

194. Nevertheless, it is worth mentioning that Uganda gets some advantages out of the fact that it is served by the E.A.R. & H. under the terms of through booking of all goods without breaking distance at the Uganda frontier; that is to say without separate calculation of charges for the distance on the territory of Kenya and on the territory of Uganda.

195. As we shall see further in the case of transit regulations for Zambia, such a practice of through tariffing is not granted automatically for goods crossing state frontiers, and the benefits derived by Uganda from the through tariffing of its external trade traffic may be quantified as follows:

TABLE 28

Benefits derived by Uganda from the through tariffing of its transit traffic via Kenya

		Volume carried (1962) in '000 metric tons	Cost of transit in '000 \$			Benefit (Column 5 less column 4)
			at the direct rates between Kampala and Mombasa		at the rates between Mombasa and Uganda frontier	
			for the distance Kampala- Mombasa	for the transit distance of Kenya (90% of column 3)		
	1	2	3	4	5	6
Export		253	4,308	3,870	4,017	147
Import		500	12,510	11,260	11,430	170
	Total:	753	15,818	15,130	15,447	317

196. Thus, the amount of discount may be estimated as 2 per cent of the total cost of transit.

(ix) Upper Volta

197. The Upper Volta has the easiest terms of transit as it uses a direct railway connexion through the Ivory Coast to Abidjan and enjoys substantial discounts and rebates on this route.

198. According to calculations of the Compagnie générale d'études et recherches pour l'Afrique (COGERAT), the discounts granted by the Régie du chemin de fer Abidjan-Niger in 1959 for goods in transit to or from the Upper Volta were about 50 per cent for exports and about 10 per cent for imports.<sup>1/</sup> That was a result of the following kinds of discounts and rebates:

<sup>1/</sup> République de Haute Volta. Tome II Analyse par secteur. Secteurs non agricoles Cogeraf 1961, p.62.

Since 1958, the Régie du chemin de fer Abidjan-Niger has established special fixed tariffs that are much lower than the general tariffs.<sup>1/</sup>

Under special conventions, the Régie du chemin de fer Abidjan-Niger affords a special discount to those consignors who undertake to send the whole of their goods by rail only. This kind of discount gives a reduction of costs from 5,300 francs - about \$22 - for cereals, ground-nuts, etc. between Bobo-Dioulasso and Abidjan to 2,400 francs - \$10 - per ton. At the end of the crop season ("traite") consignors get also a substantial rebate in proportion to the volume of their shipments. Such a rebate brings the actual cost down to 2,200 frs. - \$9 - per ton.

Lastly, the consignor gets some governmental rebates to reduce the cost of exportation for such commodities as "karité" (vegetable oil), which brings the cost of railage to the rather low level of 1,600 francs - \$ 6.5 - per ton.

199. If we apply these calculations to the volume of transit in 1962, the total discount may be estimated at \$70,000 for exports and \$200,000 for imports.<sup>2/</sup>

200. The relations between the Upper Volta and the Ivory Coast on all matters of railway traffic are now regulated by the Convention of 30 April 1960, which fixes the organization and the operating conditions of the Régie du chemin de fer Abidjan-Niger.<sup>3/</sup>

1/ According to the "tarif général" of the RAN, the rate per ton-km equals fr CFA 16; the average rate for down-traffic at the special rates is fr CFA 2-4 and for up-traffic fr CFA 5-7.

2/ See Annex VI - i.

3/ Convention entre la République de Côte-d'Ivoire et la République de Haute Volta, fixant l'organisation et le fonctionnement du Chemin de fer Abidjan-Niger.

(x) Zambia

201. According to the agreement between the Rhodesia Railways and the copper industry, the latter receives a rebate on all its shipments of copper "until the weight of copper exported in one particular financial year reaches 633,000 short tons, and thereafter the level of the rebate during the same financial year remains unchanged".<sup>1/</sup>

The receipts from the copper traffic are distributed proportionally between the Rhodesia Railways and the Mozambique Railways. All other traffic is charged with the break of distance on the Rhodesia-Mozambique frontier, which substantially increases the cost of transit.

202. The disadvantage for Zambia traffic arising out of this rule (separate rates for Zambia-Rhodesia territory and for Mozambique territory) may be quantified as follows:

TABLE 29

Extra payments for Zambia transit

in million \$

	Cost of transit under existing methods of computing goods rates *			Cost of transit if through rates were applied	Difference paid by Zambia
	through territory of Rhodesia (1,110km)	Through territory of Mozambique (about 430km)	Total transit (1,540km)	(1,540 km)	
<u>Export</u>					
1. Copper	10.2	4.6	14.8	14.8	-
2. Other	1.6	0.9	2.5	1.8	0.7
Total:	11.8	5.5	17.3	16.6	0.7
<u>Import</u>					
1. Petroleum products	2.3	0.9	3.2	3.2	-
2. Other	2.3	1.9	4.2	2.0	2.2
Total:	4.6	2.8	7.4	5.2	2.2
Grand total	16.4	8.3	24.7	21.8	2.9

\* Official Railway Tariff Book of Rhodesia Railways No.29 clause 247.

<sup>1/</sup> The letter of Nov.9, 1965 No.R.B.43 from the Rhodesia Railways Board.

203. Table 29 shows that Zambia paid about \$3 million as the result of unfavourable methods of computing rates for its transit.

(c) Kinds of concessions on transit routes

204. The analyses of the discount systems on the transit routes of African land-locked states show that five kinds of concessions are granted for the external traffic of those states.

205. The transit traffic of some countries enjoys the right to special tariffs, which are lower than the general tariffs. In some of these cases the discounts are granted on nearly all commodities, but in others only the main export commodity enjoys the discount. Such are the cases for the transit traffic of:

- Rwanda and Burundi through Uganda, Kenya and Tanzania;
- The Upper Volta through the Ivory Coast;
- Chad and Central African Republic through the Congo (Brazzaville).

206. The other kind of concession is a rebate granted by the transit railway to its permanent customers who send all of their shipments by the particular railway (and not by some other railway or road hauliers). This kind of discount is in operation:

- On the "Federal Route" (voie fédérale) for the shipment of cotton from Chad and the CAR through the Congo (Brazzaville) to Pointe Noire and for the shipment of petroleum products from Pointe Noire to Chad;
- On the Régie de chemin de fer Abidjan-Niger for the railage of export crops from the Upper Volta.

207. In some cases there are direct governmental subsidies aimed at supporting exports from a land-locked country. The first example is donations to the exporters of ground-nuts from the eastern part of Niger when transited via Dahomey (Opération hirondelle). The second is donations for the export of "Karité" from the Upper Volta through the Ivory Coast.

208. In the two remaining cases, the fact of concession is not always obvious, as it is not stated in tariff books.

209. Under these kinds of concessions we may list the case of Uganda transit through Kenya, when all shipments are charged at the direct through rates without breaking distance at the frontier between Uganda and Kenya.

210. The other example of such a hidden discount appears in the form of a sharp differentiation in the Nigerian Railways rates, which are rather low (per ton-km) on long distances. This affects the transit traffic of Niger and Chad.

211. The analyses further show that in the majority of cases the discounts are made on the railway section of transit routes. There is only one case of discount on a river section of the transit route (from Bangui to Brazzaville on the Federal route). There is no example of discount on the road section of any transit route.

## CHAPTER V

### PROBLEMS TO BE SOLVED

212. The independent African countries are confronted with the problem of free transit at a historical period when many factors are working to their advantage: the level of development of transport technique makes possible good transport connexions between the interior and the coast, and the spirit of co-operation among all African countries allows one to envisage an easy solution of other aspects of the transit problem.

213. An understanding of this was shown in the speeches of the representatives at the seventh session of ECA, who underlined the need for a unified attack on the problems of under-development in Africa and stated that it "required unity of purpose and co-operation at both regional and continental levels and while assistance from many outside sources would continue to be needed, the key to real and lasting progress was the willingness of Africans to work hard, make sacrifices and forgo some national advantages for the good of all."<sup>1/</sup>

#### (a) Co-operation between land-locked and transit countries

214. This paper is meant to show the reciprocal advantages to be derived through co-operation between a land-locked country and its transit country, and to acquaint all African land-locked countries with the possibilities of such co-operation in the African continent.

215. At the same time, the study brings to light cases where the lack of co-operation between a land-locked country and a transit country or the carrier hampers the rapid achievement of economic development.

216. The advantage of African land-locked states lies also in the fact that Africa is endowed with potentialities to enable it to deal with the problems of co-ordination.

217. Thus, besides the ruling body represented by the Organization of African Unity, which may be the last resort for solving any misunderstanding, African countries may currently use the services of the mechanism provided by the Working Parties set up at the seventh session of ECA.

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<sup>1/</sup> Annual Report of the seventh session E/CN.14/343/Rev.1, p.27.

218. As Resolution 128(VII) expressed, one of the tasks of the Working Party on Transport and Communications should be to secure the implementation of the ECA decisions and items of the work programme and among them the item 31 - Transit problems of land-locked countries.<sup>1/</sup>

219. The other way to achieve this goal is to turn to the possibilities of bilateral negotiations with neighbouring countries according to the principles established by the convention on transit trade of land-locked states, adopted by the conference of 58 states in New York on 8 July 1965.

220. As this paper shows, there are many examples of successful results achieved through direct negotiations started by the land-locked countries after they had gained their independence.

221. In Resolution 149(VII) on the establishment of the Tanzania-Zambia railway link, the seventh session of ECA welcomed the steps taken by Tanzania and Zambia by way of bilateral approach to the problem of sub-regional integration and urged other African countries to do the same wherever possible.

(b) Special facilities for transit traffic

222. The economy of the African land-locked states is very vulnerable, being largely dependent on external trade. The development of the latter in turn depends to a great extent on the conditions prevailing on the transit routes through which it passes.

223. That is why the question of rates applied to transit traffic is of the utmost importance for all land-locked states.

224. The economic justification for favourable terms of transit and even for preferences has been proved beyond doubt through practice of operation on all transit routes in Africa as in other continents. Additional advantages from transit traffic might form the economic basis that would serve as a source of mutual co-operation between land-locked and transit countries. Where in some cases such an approach happened to be against

<sup>1/</sup> E/CN.14/Res/128(VII) and E/CN.14/313/Rev.1 - ii - g project 31, p.27.

the interests of the carriers serving transit traffic, it would in the end be to the advantage of the integrated African economy.

225. Concessions on transit routes may take different forms in different cases: either special transit tariffs, or special rebates, or donations and subsidies. Some kind of concession may also be obtained through building up tariffs in such a way as to favour transit traffic. (Sharp differentiation of rates for long distance, through tariffs etc.).

226. But the main difficulty here seems to be the poor operating efficiency of some of the railways serving the transit traffic of the African land-locked countries. Obsolete equipment, bad technical features of railway lines built by colonial powers mainly for the purpose of the quicker penetration into Africa, inefficient management - all these make many railways unprofitable and hamper the possibility of rate reduction for the transit traffic of land-locked countries. In this connexion, the best way of improving the existing situation seems to lie in a complex approach to the problem. This should provide for the simultaneous development of both the transport facilities of the sub-region and ease the position of the land-locked countries concerned.

227. Such a complex approach should of course include the relevant measures concerning both railway and road transport and where possible also inland waterways.

228. This work does not preclude the necessity of taking immediate action in cases where the unfavourable situation for transit traffic is created by the tariff policies of transport companies.

229. The next step in the improvement of transit facilities is to solve the problem of adequate port facilities servicing the transit traffic of land-locked states. The problem may be solved through the creation of special free zones in the ports of the transit country, placed under the control of the Customs authorities of the land-locked country. In those cases where the volume of transit traffic does not justify the expense of establishing a separate free zone the transit country may be

asked to allow the uncleared storage of transit goods under favourable conditions in regard to port charges and Customs regulations.

230. The convention of 1963 between Senegal and Mali and the agreement of 1965 between Niger and Dahomey in respect of port facilities may serve as good examples for other African countries.

(c) Participation in the international Convention on transit trade of land-locked states

231. The importance of the Convention lies in the fact that it is the first attempt to provide legal safeguards for transit traffic of land-locked states on an international level. That means that the scope of the task is specifically limited to picking out the special problems of transit trade of land-locked countries out of the general problems of freedom of transit.

232. The adoption of this Convention by the majority of states on 8 July 1965 calls for further action from African States to secure the prompt implementation of the principles expressed in the Convention.

233. The Resolution adopted by the Conference on 8 July 1965 simultaneously with the adoption of the Convention recommends that all States examine, as soon as possible and in a sympathetic spirit, the possibility of becoming parties to the Convention.

ANNEX I  
CALCULATION

of the relative volume of the external trade of African land-locked States  
(in million \$)

	Total GDP (average for 1959- 1961) <u>a/</u>	Commer- cializa- tion of GDP in % <u>c/</u>	Commer- cialized GDP	Export (average 1959- 1961) <u>a/</u>	% of export in commer- cialized GDP
1. Burundi	133	55	73	21	29
2. CAR	112	60	67	14	21
3. Chad	201	56	113	17	15
4. Malawi	75 <sup>b/</sup>	46	35	29 <sup>b/</sup>	83
5. Mali	275	57	157	12	8
6. Niger	199	35	70	12	17
7. Rwanda	133	55	73	21	29
8. Uganda	463	72	333	119	36
9. Upper Volta	184	33	61	4	7
10. Zambia	570 <sup>b/</sup>	85	484	335 <sup>b/</sup>	69
	2,345	62	1,466	584	40
All OAU States	24,000			4,500	

Sources:

a/ E/CN.14/FMAB/11. Table 7 A, p. 24 and Table 9, p. 28.

b/ National Accounts of the Federation of Rhodesia and Nyasaland, 1954-1962, Supplement.

c/ Republique Francaise, Ministère de la Coopération, Planification en Afrique. Vol. 4, p. 75, for West Africa, and E/CN.14/INR/44, Annex IV, for East Africa.

## ANNEX II

## EXTERNAL TRADE

of African land-locked States in 1962

Value = million \$; Volume = thousand metric tons

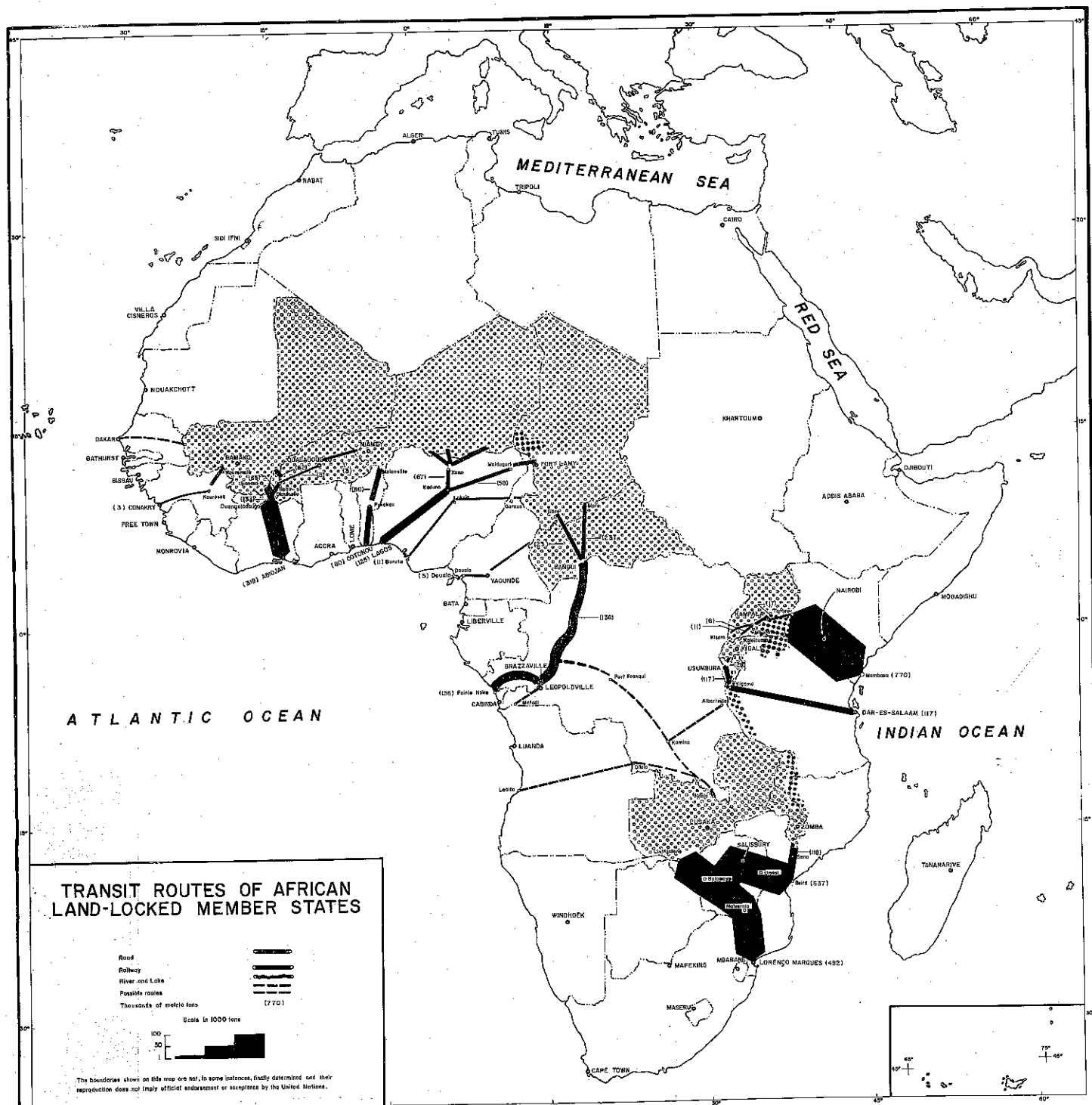
	External trade		of which transit trade			
	Value		Export		Import	
	Export	Import	Value	Volume	Value	Volume
1. Burundi	9.8	22.3	9.6	22	22.0	66
2. CAR	14.4	25.5	13.9	26	24.8	69
3. Chad	25.1	38.2	12.8	26	27.9	89
4. Malawi	28.6	23.0	28.6	46	23.0	72
5. Mali	29.2	51.1	8.8	48	40.7	150
6. Niger	19.3	27.1	12.9	79	20.3	72
7. Rwanda	10.2	10.1	9.8	14	10.0	32
8. Uganda	105.2	73.5	102.0	253	73.1	500
9. Upper Volta	8.2	35.1	2.6	11	29.0	110
10. Zambia	335.0	107.0	335.0	750	107.0	271
Total	585.0	412.9	536.0	1,275	377.8	1,431

Sources:

- 1/ Burundi - Bulletin mensuel de la Banque d'Emission du Rwanda et du Burundi. No.5 - jan.-fév. 1963 and customs statistics.
- 2/ Central African Republic. Bulletin mensuel de statistique XI Année. No. 132. déc. 1962, pages 6 - 11 (without trade inside the Equatorial Customs Union).
- 3/ Chad - Bulletin mensuel de statistique de la République du Tchad, fév. 1964 pages 33 and 36 - 37. jan. 1963, pages 13 and 29; Institut national de la statistique et des études économiques. Compendium des statistiques du commerce extérieurs des pays africains et malgache en 1962, page 171.
- 4/ Malawi - National Accounts of the Federation of Rhodesia and Nyasaland, 1954 - 1962, Supplement.

Sources (continued)

- 5/ Mali - Bulletin statistique mensuel No.1, Année 1963, p.13 - 21 and Chambre de Commerce, d'agriculture et d'industrie de Bamako. Annuaire statistique 1962 de la République du Mali, page 21.
- 6/ Niger, Annuaire statistique 1962, tableaux no. 8 - 3 and no. 8 - 5.
- 7/ Rwanda - Bulletin mensuel de la Banque d'Emission du Rwanda et du Burundi. No.5 - jan.fév. 1963 and customs statistics.
- 8/ Uganda - Annual Trade Report of Kenya, Uganda and Tanganyika for 1962 - Domestic export and net import without inter-territorial trade.
- 9/ Upper Volta - Bulletin mensuel de statistique, juin 1963, no.6.
- 10/ Zambia - National Accounts of the Federation of Rhodesia and Nyasaland, 1954 - 1962. Supplement (without trade inside Federation).



ANNEX IV

Average cost of transit

	Volume of transit in million ton - km		Cost of transit in '000 \$		Average cost of transit in ø per ton - km	
	Export	Import	Export	Import	Export	Import
1. Burundi	32.9	98.8	443	2,041	1.35	2.07
2. CAR	45.2	119.1	694	2,409	1.53	2.02
3. Chad	54.4	188.9	1,127	5,877	2.07	3.11
4. Malawi	16.5	25.9	615	1,380	3.73	5.32
5. Mali	37.0	118.5	566	3,917	1.53	3.30
6. Niger	87.6	69.6	1,888	1,953	2.15	2.81
7. Rwanda	23.6	51.9	616	1,663	2.61	3.21
8. Uganda	275.0	542.0	3,870	11,260	1.41	2.08
9. Upper Volta	6.7	69.4	74	1,793	1.10	2.59
10. Zambia	1,154.0	418.0	16,820	7,340	1.46	1.76
Total	1,732.9	1,702.1	26,713	39,633	1.54	2.33

Sources: Annexes V and VI.

ANNEX V - a

Transit trade of Burundi in 1962

	Value in '000 \$	Volume in '000 metric tons	Transit in million ton - km			
			Total	of which		
				by rail	by road	by land
<u>Export</u>						
1. Coffee	7,400	14	21.5	18.5	-	3.0
2. Cotton	1,000	2	3.3	2.8	-	0.5
3. Feeding stuffs	300	4	6.1	5.3	-	0.8
4. Other	900	2	2.0	1.7	-	0.3
Total	9,600	22	32.9	28.3	-	4.6
<u>Import</u>						
1. Petroleum products	1,900	17	25.9	22.3	-	3.6
2. Flour	1,800	14	21.6	18.6	-	3.0
3. Cement	300	7	10.7	9.2	-	1.5
4. Edible products	2,400	12	18.5	15.9	-	2.6
5. Other	15,600	16	22.1	19.0	-	3.1
Total	22,000	66	98.8	85.0	-	13.8
Grand total	31,600	88	131.7	113.3	-	18.4

Sources: The Customs statistics of the Central Bank of Rwanda-Burundi and the Bulletin mensuel de la Banque d'émission du Rwanda et du Burundi, No.5, janvier/février 1963.

Note: Conversion factor: \$1 = 50 fr. Rwanda-Burundi.

Transit traffic in the Central African Republic in 1962

	Value in '000 \$	Volume in '000 metric tons	Transit in million ton - km			
			Total	of which		
				by rail	by road	by river
<b>Export</b>						
1. Coffee	4,300	8	14.0	4.0	-	10.0
2. Cotton	4,700	8	14.7	4.2	-	10.5
3. Ground-nuts	300	2	2.3	0.7	-	1.6
4. Other	4,600	8	14.2	4.1	0.7	9.4
Total	13,900	26	45.2	13.0	0.7	31.5
<b>Import</b>						
1. Petroleum products	1,200	26	46.8	13.5	-	33.3
2. Cement	500	22	38.5	11.1	-	27.4
3. Other	23,100	21	33.8	9.8	2.7	21.3
Total	24,800	69	119.1	34.4	2.7	82.0
Grand total	38,700	95	164.3	47.4	3.4	113.5

Source: République Centrafricaine, Bulletin Mensuel de statistique, XI Année  
no.132, déc. 1962, pp.6-10.

## Transit trade in Chad in 1962

	Value in '000 \$	Volume in '000 metric tons	Transit in million ton - km			
			Total	of which		
				by rail	by road	by river
<u>Export</u>						
1. Cotton	11,560	20.2	41.3	8.4	8.3	24.6
2. Other	1,250	5.7	13.1	3.0	2.9	7.2
Total	12,810	25.9	54.4	11.4	11.2	31.8
<u>Import</u>						
1. Petroleum products	3,730	38.3	81.3	36.5	28.0	16.8
2. Cement	1,520	19.9	41.3	21.3	15.7	4.3
3. Other	22,690	30.9	66.3	15.7	14.9	35.7
Total	27,940	89.1	188.9	73.5	58.6	56.8
Grand total	40,750	115.0	243.3	84.9	69.8	88.6

Sources: Bulletin mensuel de statistique de la République du Tchad, Janvier 1963 pages 11 - 14 exports and ibid février 1963, no.104, pages 27 - 30 for imports.

Transit trade in Malawi in 1962

	Value in '000 \$	Volume in '000 metric tons	Transit in million ton - km		
			Total	of which	
			by rail	by road	by river
<u>Export</u>					
1. Ground-nuts	3,100	18	6.5	6.5	
2. Tobacco	14,900	12	4.3	4.3	
3. Tea	9,300	12	4.3	4.3	
4. Other	1,300	4	1.4	1.4	
Total	28,600	46	16.5	16.5	
<u>Import</u>					
1. Petroleum products	1,700	29	10.4	10.4	
2. Other	21,300	43	15.5	15.5	
Total	23,000	72	25.9	25.9	
Grand total	51,600	118	42.4	42.4	

Sources: The Central Statistical Office of the Federation of Rhodesia and Nyasaland.

Transit trade of Mali in 1962

	Value in '000 \$	Volume in '000 metric tons	Transit in million ton - km			
			Total	of which		
				by rail	by road	by river
<u>Export</u>						
1. Ground-nuts	7,360	41.0	31.9	27.8	4.1	-
2. Cotton	670	2.1	1.6	1.4	0.2	-
3. Other	810	4.4	3.5	3.0	0.5	-
Total	8,840	47.5	37.0	32.2	4.8	-
<u>Import</u>						
1. Petroleum products	2,345	52.2	40.7	35.5	5.2	-
2. Cement	475	26.0	20.3	17.7	2.6	-
3. Other	37,900	72.0	57.5	49.4	6.9	1.2
Total	40,720	150.2	118.5	102.6	14.7	1.2
Grand total	49,560	197.7	155.5	134.8	19.5	1.2

Sources: République du Mali, Bulletin statistique mensuel no.1. Année 1963, p. 13 - 21 and Chambre de Commerce d'agriculture et d'industrie de Bamako. Annuaire statistique 1962 de la République du Mali, p.21.

Note: Conversion factor: \$1 = 245 F.M.

## Transit trade of Niger in 1962

	Value in '000 \$	Volume in '000 metric tons	Transit in million ton - km			
			of which			
			Total	by rail	by road	by river
<u>Export</u>						
1. Ground-nuts	10,930	70	76.0	58.5	17.5	-
2. Vegetable oils	780	7	9.9	8.5	1.4	-
3. Other	1,210	2	1.7	1.2	0.5	-
Total	12,920	79	87.6	68.2	19.4	-
<u>Import</u>						
1. Petroleum products	1,000	21	16.0	9.3	6.7	-
2. Cement	270	17	12.9	7.5	5.4	-
3. Other	19,040	34	40.7	31.6	9.1	-
Total	20,310	72	69.6	48.4	21.2	-
Grand total	33,230	151	157.2	116.6	40.6	-

Source: République du Niger, Annuaire statistique 1962. Tableaux No.8 - 3 et No. 8 - 5.

## Transit trade of Rwanda in 1962

	Value in '000 \$	Volume in '000 metric tons	Transit in million ton - km			
			of which			
			Total	by rail	by road	by lake
<u>Export</u>						
1. Coffee	5,000	9	15.6	12.2	1.5	1.9
2. Tin ore	4,200	3	5.0	3.9	0.6	0.5
3. Other ores		1	1.6	1.3	0.1	0.2
4. Pyrethrum	400	1	0.7	0.5	0.2	-
5. Other	200	1	0.7	0.5	0.1	0.1
Total	9,800	15	23.6	18.4	2.5	2.7
<u>Import</u>						
1. Petroleum products	1,500	14	22.7	17.1	4.7	0.9
2. Flour	500	4	6.5	5.1	0.7	0.7
3. Cement	100	2	2.9	2.3	0.2	0.4
4. Edible products	600	3	6.2	4.8	0.8	0.6
5. Salt	100	2	2.4	1.8	0.6	-
6. Other	7,200	7	11.2	8.6	1.8	0.8
Total	10,000	32	51.9	39.7	8.8	3.4
Grand total	19,800	47	75.5	58.1	11.3	6.1

Sources: Customs statistics of the Central Bank of Rwanda-Burundi and the Bulletin mensuel de la Banque d'Emission du Rwanda et du Burundi, no.5 - janvier-février 1963.

Notes: Conversion factor: \$1 = 50 fr. Rwanda-Burundi.

Transit trade of Uganda in 1962

	Value in '000 \$	Volume in '000 metric tons	Transit in million ton - km		
			of which		
			Total	by rail	by road by river
<u>Export</u>					
1. Coffee	54,500	128	139	139	
2. Cotton	23,100	33	36	36	
3. Feeding stuffs	2,440	37	40	40	
4. Ground-nuts	970	7	8	8	
5. Cereals	440	11	12	12	
6. Tea	4,800	5	6	6	
7. Hides	3,330	5	5	5	
8. Oil seeds	540	4	4	4	
9. Copper	10,110	16	17	17	
10. Other	1,790	7	8	8	
Total	102,020	253	275	275	
<u>Import</u>					
1. Aviation spirit	610	8	9	9	
2. Motor spirit	2,270	64	70	70	
3. Kerosene	1,180	30	33	33	
4. Fuel oils	2,030	51	55	55	
5. Salt	410	27	29	29	
6. Iron and steel	2,600	14	15	15	
7. Textiles	12,700	34	37	37	
8. Fertilizers	620	9	10	10	
9. Rice	690	3	3	3	
10. Motor vehicles	6,490	7	8	8	
11. Other	43,500	253	273	273	
Total	73,100	500	542	542	
Grand total	175,120	753	817	817	

Annex V - h (continued)

1. The figures for export and import are taken from the Annual Trade Report of Kenya, Uganda and Tanganyika for the year ended 31st December 1962.

For exports see Domestic export - Table 4, less exports to Congo, Rwanda-Burundi and Sudan (Table III).

For imports see net import - Table 3, less import from Congo, Rwanda-Burundi and Sudan (Table I).

2. Conversion factors are: £1 = \$2.80; 1 metric ton = 22 centials = 300 imperial gallons of oil products.

3. The distance between Tororo and Mombasa is 1,088 km (676 miles East African Railways and Harbours, Tariff Book No.3, Clause 350, page 150).

4. "Other" imports are calculated on the assumption that each cental costs £3 (a cental of goods defined costs £ 1.9.-).

Transit trade of the Upper Volta in 1962

	Value in '000 \$	Volume in '000 metric tons	Transit in million ton - km			
			of which			
			Total	by rail	by road	by water
<u>Export</u>						
1. Ground-nuts	60	1.1	0.7	0.7	-	-
2. Vegetable oils	270	5.7	3.6	3.6	-	-
3. Other	2,260	3.9	2.4	2.4	-	-
Total	2,590	10.7	6.7	6.7	-	-
<u>Import</u>						
1. Petroleum products	1,200	30.2	19.0	19.0	-	-
2. Cement	450	27.1	17.1	17.1	-	-
3. Other	27,390	52.8	33.3	33.3	-	-
Total	29,040	110.1	69.4	69.4	-	-
Grand total	31,630	120.8	76.1	76.1	-	-

Source: République de Haute-Volta. Bulletin mensuel de statistique. juin 1963, No.6.

Transit trade of Zambia in 1962

	Value in '000 \$	Volume in '000 metric tons	Transit in million ton - km			
			of which			
			Total	by rail	by road	by water
<u>Export</u>						
1. Copper	302,000	520	801	801	-	-
2. Ground-nuts	3,000	15	23	23	-	-
3. Other	30,000	215	330	330	-	-
Total	335,000	750	1,154	1,154	-	-
<u>Import</u>						
1. Oil products	5,000	148	229	229	-	-
2. Other	102,000	123	189	189	-	-
Total	107,000	271	418	418	-	-
Grand total	442,000	1,021	1,572	1,572	-	-

Source: Central Statistical Office of the Federation of Rhodesia and Nyasaland.

## ANNEX VI

## COST

of transit for the external trade of Burundi  
in 1962

	Volume in '000 metric tons	Transit in million ton - km.	Rate per ton-km in ¢		Cost of transit in '000 \$	
			general rate	transit rate	at gen- eral rates	at tran- sit rates
<u>Via Tanzania</u>						
<u>1. By rail 1,290 km.</u>						
<u>a). Export</u>						
1. Coffee	14.4	18.5	1.68	1.12	310.8	207.0
2. Cotton	2.2	2.84	1.34	1.12	38.1	31.9
3. Feeding stuffs	4.1	5.29	0.62	0.59	32.8	31.3
4. Other	1.3	1.68	1.59	1.42	26.7	23.8
Total	22.0	28.3	1.44	1.04	408.4	294.0
<u>b). Import</u>						
1. Petroleum products	17.3	22.3	2.96	2.96	660.0	660.0
2. Flour	14.4	18.6	1.01	0.87	188.0	161.1
3. Cement	7.1	9.15	1.01	0.87	93.6	80.0
4. Edible products	12.3	15.9	1.48	1.35	234.8	214.8
5. Other	14.7	19.0	2.34	2.08	445.1	395.1
Total	65.8	85.0	1.91	1.78	1,621.5	1,511.0
<u>2. By lake 210 km.</u>						
<u>a). Export</u>						
1. Coffee	14.4	3.02	3.71	-	112.5	-
2. Cotton	2.2	0.46	4.02	-	18.5	-
3. Feeding stuffs	4.1	0.86	1.21	-	10.4	-
4. Other	1.3	0.27	2.66	-	7.2	-
Total	22.0	4.61	3.22	3.22	148.6	148.6

	Volume in '000 metric tons	Transit in million ton - km.	Rate per ton-km. in /		Cost of transit in in '000 \$	
			general rate	transit rate	at gen- eral rates	at tran- sit rates
b). <u>Import</u>						
1. Petroleum products	17.3	3.64	4.13	-	150.2	-
2. Flour	14.4	3.02	4.00	-	120.8	-
3. Cement	7.1	1.49	2.81	-	41.9	-
4. Edible products	12.3	2.58	3.78	-	101.2	-
5. Other	14.7	3.07	3.80	-	116.4	-
Total	65.8	13.8	3.84	3.84	530.5	530.5
Grand total	87.8	131.7	2.06	1.89	2,709.0	2,484.1

- Sources:
1. The rates on the railway part of the route are taken from the East African Railways and Harbours Tariff Book No. 3. Part II, clause 350 (general rates) and clause 346 (transit rates).
  2. The rates on Lake Tanganyika are taken from the Compagnie des chemins de fer du Congo superieur aux grands lacs africaine. Reglement et tarifs Fascicule II. Tarifs. Supplement No. 7.

## COST

of transit for the external trade of the Central African Republic

in 1962

	Volume in '000 metric tons	Transit in mil- lion ton-km.	Rate per ton-km. in c		Cost of transit in '000 \$	
			General rate	Transit rate	at gene- ral rates	at tran- sit rates
<u>Via Congo (Brazzaville)</u>						
<u>1. By rail (510 km)</u>						
a). <u>Export</u>						
1. Coffee	7.9	4.03	2.23	2.23	90	90
2. Cotton	8.3	4.24	1.97	1.65	86	70
3. Ground-nuts	1.3	0.65	1.97	1.97	13	13
4. Other	7.5	3.83	2.11	2.11	81	81
Total	25.0	12.7	2.12	1.97	270	254
b). <u>Import</u>						
1. Petroleum products	26.4	13.5	1.60	1.11	216	144
2. Cement	21.7	11.1	2.05	2.05	228	228
3. Other	16.9	8.6	5.50	5.50	473	473
Total	65.0	33.2	2.76	2.54	917	845
<u>2. By river total (1,260 km)</u>						
a). <u>Export</u>						
1. Coffee	7.9	9.95	1.49	1.49	148	148
2. Cotton	8.3	10.5	1.35	1.10	141	115
3. Ground-nuts	1.3	1.64	0.84	0.71	14	12
4. Other	7.5	9.45	1.22	1.22	115	115
Total	25.0	31.5	1.33	1.24	418	390

	Volume in '000 metric tons	Transit in mil- lion ton-km.	Rate per ton-km. in ¢		Cost of transit in '000 \$	
			General rate	Transit rate	at gene- ral rates	at tran- sit rates
b). <u>Import</u>						
1. Petroleum products	26.4	33.3	1.80	1.80	595	595
2. Cement	21.7	27.4	1.61	1.61	441	441
3. Other	16.9	21.3	1.54	1.54	329	329
Total	65.0	82.0	1.67	1.67	1,365	1,365
Total via Congo	90.0	159.4	1.86	1.79	2,970	2,854

Via Cameroun

1. <u>By rail (310 km)</u>						
a). Export total	1.0	0.31	3.49	3.49	11	11
b). Import total	4.0	1.24	3.49	3.49	43	43
Total	5.0	1.55	3.49	3.49	54	54
2. <u>By road (680 km)</u>						
a). Export total	1.0	0.68	5.74	5.74	39	39
b). Import total	4.0	2.72	5.74	5.74	156	156
Total	5.0	3.40	5.74	5.74	195	195
Total via Cameroon	5.0	4.95	5.03	5.03	249	249
Grand total	95.0	164.4	1.97	1.89	3,219	3,103

- Sources:
1. The tariffs on the river and partly on the Congo-Océan railway are from Cie générale de transports en Afrique Equatoriale, Art.72, 83, 102, 104 and 105.
  2. The tariffs on the Congo-ocean railway are taken from the Bulletin des statistique générales de l'Union douanière equatoriale, juillet 1963, No.3 pp. 22-23.

COST

of transit for the external trade of Chad  
in 1962

	Volume in '000 metric tons	Transit in mil- lion ton-km.	Rate per ton-km. in c		Cost of transit in '000 \$	
			General rate	Transit rate	at gene- ral rates	at tran- sit rates
<u>A. Via Nigeria (Lagos)</u>						
<u>1. By rail (1,180 km)<sup>xx</sup></u>						
a). <u>Export</u>						
1. Cotton	2.0	2.4	5.45	2.54	131	61
Total	2.0	2.4	5.45	2.54	131	61
b). <u>Import</u>						
1. Petroleum products <sup>xx</sup>	25.0	29.5	3.61	2.83	1,050	825
2. Cement	16.5	19.5	2.13	1.44	415	280
3. Other	3.5	4.1	2.15	1.54	88	63
Total	45.0	53.1	2.93	2.20	1,553	1,168
<u>2. By road (850 km)</u>						
1. Cotton	2.0	1.7	2.90		49	
Total	2.0	1.7	2.90	2.90	49	49
b). <u>Import</u>						
1. Petroleum products	25.0	21.2	5.19		1,100	
2. Cement	16.5	14.0	4.51		632	
3. Other	3.5	3.0	4.51		135	
Total	45.0	38.2	4.90	4.90	1,867	1,867
Total via Lagos	47.0	95.4	3.78	3.30	3,600	3,145

	Volume in '000 metric tons	Transit in mil- lion ton-km	Rate per ton-km in ¢		Cost of transit in '000 \$	
			General rate	Transit rate	at gene- ral rates	at tran- sit rates
<u>B. Via Nigeria (Burutu)</u>						
<u>1. By Bénoué river</u>						
<u>(1,500 km.)</u>						
<u>a). Export</u>						
1. Cotton	6.7	10.1	2.57		260	
Total	6.7	10.1	2.57	2.57	260	260
<u>b). Import</u>						
1. Other	5.0	7.5	2.57		194	
Total	5.0	7.5	2.57	2.57	194	194
<u>2. By road (110 km)</u>						
<u>a). Export</u>						
1. Cotton	6.7	0.7	4.40		31	
Total	6.7	0.7	4.40	4.40	31	31
<u>b). Import</u>						
1. Other	5.0	0.5	4.40		22	
Total	5.0	0.5	4.40	4.40	22	22
Total via Burutu	11.7	18.8	2.70	2.70	507	507
<u>C. Via the CAR and Congo</u>						
<u>(Pointe Noire)</u>						
<u>1. By rail (510 km.)</u>						
<u>a). Export</u>						
1. Cotton	11.5	5.9	1.97	1.42	116	84 -
2. Other	5.7	2.9	2.10	2.10	61	61
Total	17.2	8.8	2.01	1.65	177	145

	Volume in '000 metric tons	Transit in mil- lion ton-km	Rate per ton-km in ¢		Cost of transit in '000 \$	
			General rate	Transit rate	at gene- ral rates	at tran- sit rates
b). <u>Import</u>						
1. Petroleum products	13.3	6.9	1.50	1.10	103	76
2. Cement	3.4	1.7	2.05	2.05	35	35
3. Other	22.4	11.4	5.50	5.50	627	627
Total	39.1	20.0	3.82	3.69	765	738

2. By the RiverOubangui (1,260 km)a). Export

1. Cotton	11.5	14.5	1.36	0.55	197	80 -
2. Other	5.7	7.2	1.22	1.22	88	88
Total	17.2	21.7	1.31	0.66	285	168

b). Import

1. Petroleum products	13.3	16.8	1.80	1.64	302	275 -
2. Cement	3.4	4.3	1.61	1.61	69	69
3. Other	22.4	28.2	1.54	1.54	435	435
Total	39.1	49.3	1.64	1.58	806	779

3. By road (520 km)a). Export

1. Cotton	11.5	6.0	5.74		344	
2. Other	5.7	3.0	3.30		99	
Total	17.2	9.0	4.93	4.93	443	443

	Volume in '000 metric tons	Transit in mil- lion ton-km	Rate per ton-km in ¢		Cost of transit in '000 \$	
			General rate	Transit rate	at gene- ral rates	at tran- sit rates
b). <u>Import</u>						
1. Petroleum products	13.3	6.9	8.20		557	
2. Cement	3.4	1.7	4.10		70	
3. Other	22.4	11.7	4.10		468	
Total	39.1	20.3	5.50	5.50	1,095	1,095
Total via Pointe Noire	56.3	129.1	2.78	2.59	3,571	3,368
Grand total	115.0	243.3	3.16	2.87	7,678	7,020

Notes

- x/ As far as Jos, which served as the railway terminus before the Bornu extension was completed in 1964. After Jos the traffic went to Fort-Lamy by road. Since 1964 the distance is: by rail: Lagos-Maiduguri-1,800 km and by road Maiduguri-Fort-Lamy-260 km.
- xx/ Petroleum products were railed to Kano (1,126 km) and then sent by road to Fort-Lamy (860 km).
1. The distribution between different routes and rates on the roads are taken from the Note sur les transports au Tchad, Fort-Lamy le 22 août 1963 NYB/Co. - Ministère des transports (if not otherwise indicated).
  2. The volume of cement, transited via Pointe Noire, is taken from the Bulletin mensuel de statistique de la République du Tchad, janvier 1963. No. 103 page 15.
  3. The rates on the Nigerian Railways and roads are taken from Communauté Economique Européenne. NEDECO-SEDES. Etude économique de problèmes de transports au Niger et au Dahomey. Annex G-64 and Tome 1, page 107 bis.
  4. The rates on the River Benue are taken from Société d'études du chemin de fer Douala-Tchad. Avant-projet. Rapport d'ensemble, 1960, page 5.
  5. The rates on the River Oubangui and the Congo-océan railway are taken from Tarifs passagers et marchandises. Art. 72, 83, 98, 102, 104, 105 and from Bulletin des statistiques générale de l'Union douanière équatoriale, juillet 1963, No.3 p.22-23.

COST  
of transit for the external trade of Malawi  
in 1962

	Volume in '000 metric tons	Transit in mil- lion ton-km	Rate per ton-km in ¢		Cost of transit in '000 \$	
			General rate	Transit rate	at gene- ral rates	at tran- sit rates
<u>Via Mozambique</u>						
<u>1. By rail (360 km)</u>						
<u>a). Export</u>						
1. Ground-nuts	18	6.5	1.16	1.06	76	69
2. Tobacco	12	4.3	5.67	5.67	244	244
3. Tea	12	4.3	5.07	5.07	218	218
4. Other	4	1.4	6.00	6.00	84	84
Total	46	16.5	3.73	3.73	622	615
<u>b). Import</u>						
1. Petroleum products	29	10.4	5.80	5.80	603	603
2. Other	43	15.5	5.00	5.00	777	777
Total	72	25.9	5.33	5.33	1,380	1,380
Grand total	118	42.4	4.71	4.71	2,002	1,995

Notes

1. The transit rates are those shown in the Official Rhodesia Railway Tariff Book No. 29, clauses 318-319.
2. The general rate for ground-nuts is the rate used on the Rhodesia Railways and Mozambique Railways for Rhodesia ground-nuts. Ibid., clauses 248 and 254.

COST

of transit for the external trade of Mali  
in 1962

	Volume in '000 metric tons	Transit in mil- lion ton-km	Rate per ton-km in ¢		Cost of transit in '000 \$	
			General rate	Transit rate	at gene- ral rates	at tran- sit rates
<u>Via Ivory Coast</u>						
<u>1. By rail (680 km)</u>						
a). <u>Export</u>						
1. Ground-nuts	41.0	27.8	1.53	1.34	425	372
2. Cotton	2.1	1.4	1.85	1.75	26	24
3. Other	4.4	3.0	1.50	1.30	45	39
Total	47.5	32.2	1.54	1.35	496	435
b). <u>Import</u>						
1. Petroleum products	52.2	35.5	3.15	3.00	1,118	1,065
2. Cement	26.0	17.7	2.10	2.15	372	380
3. Other	69.0	47.0	3.30	3.20	1,550	1,510
Total	147.2	100.2	3.20	2.95	3,040	2,955
<u>2. By road (100 km)</u>						
a). <u>Export</u>						
1. Ground-nuts	41.0	4.1	-	2.72		112
2. Cotton	2.1	0.2	-	2.72		5
3. Other	4.4	0.5	-	2.72		14
Total	47.5	4.8	2.72	2.72	131	131
b). <u>Import</u>						
1. Petroleum products	52.2	5.2	-	5.44		283
2. Cement	26.0	2.6	-	5.44		142
3. Other	69.0	6.9	-	5.44		376
Total	147.2	14.7	5.44	5.44	801	801
Total via the Ivory Coast	194.7	151.9	2.95	2.85	4,468	4,322

	Volume in '000 metric tons	Transit in mil- lion ton-km	Rate per ton-km in ¢		Cost of transit in '000 \$	
			General rate	Transit rate	at gene- ral rates	at tran- sit rates
<u>Via Guinea</u>						
<u>1. By rail (810 km)</u>						
a). Export	-	-	-	-	-	-
b). Import	-	-	-	-	-	-
1. Other	3.0	2.4	6.0	6.0	144	144
Total	3.0	2.4	6.0	6.0	144	144
<u>2. By river (385 km)</u>						
a). Export	-	-	-	-	-	-
b). Import	3.0	1.2	1.40	1.40	17	17
Total	3.0	1.2	1.40	1.40	17	17
Total via Guinea	3.0	3.6	4.47	4.47	161	161
Grand total	197.7	155.5	2.98	2.88	4,629	4,483

#### Notes

1. The railway rates are taken from the letter of 16 February 1965 No. 435 -EX/0 Régie du chemin de fer Abidjan - Niger. The general rates are those applied for the average distance inside Ivory Coast (Abidjan-Ferkessé).
2. The road rates are taken from the Décret du Président du Gouvernement de la République du Mali, Koulouba le 22 mars 1963.
3. The rates are taken from E/CN.14/TRANS/17.

## COST

of transit for the external trade of Niger in 1962

	Volume in '000 metric tons	Transit in mil- lion ton-km	Rate per ton-km in $\phi$		Cost of transit in '000 \$	
			General rate	Transit rate	At gene- ral rates	At tran- sit rates
<u>A. Via Dahomey</u>						
<u>1. By rail (440 km)</u>						
<u>a). Export</u>						
1. Ground-nuts	30.3	13.3	2.26	2.40	298	320
2. Other	1.4	0.6	2.50	2.68	15	16
Total	31.7	13.9	2.45	x/	313	336
<u>b). Import</u>						
1. Petroleum products	21.1	9.3	4.64	4.16	431	388
2. Cement	17.1	7.5	3.59	2.30	269	172
3. Other	10.8	4.8	3.77	2.92	181	140
Total	49.0	21.6	4.07	x/	881	700
<u>2. By road (315 km)</u>						
<u>a). Export</u>						
1. Ground-nuts	30.3	9.6	3.04	2.40	292	240
2. Other	1.4	0.4	3.50	2.68	14	11
Total	31.7	10.0	3.06	x/	306	251
<u>b). Import</u>						
1. Petroleum products	21.1	6.7	7.66	4.16	514	280
2. Cement	17.1	5.4	3.35	2.30	181	124
3. Other	10.8	3.4	3.56	2.92	121	99
Total	49.0	15.5	5.26	x/	816	503
Total via Dahomey	80.7	61.0	3.80	2.94	2,316	1,790

x/ See note 2.

	Volume in '000 metric tons	Transit in mil- lion ton-km	Rate per ton-km in ¢		Cost of transit in '000 \$	
			General rate	Transit rate	At gene- ral rates	At tran- sit rates
<u>B. Via Nigeria</u>						
<u>1. By rail (1,150 km)</u>						
a) <u>Export</u>						
1. Ground-nuts	39.3	45.2	2.78	1.93	1,258	874
2. Vegetable oils	7.4	8.5	2.67	1.64	227	139
3. Other	0.5	0.6	4.35	2.54	26	15
Total	47.2	54.3	2.78	1.90	1,511	1,028
b) <u>Import</u>						
1. Other	20.1	23.1	2.15	1.54	497	356
Total	20.1	23.1	2.15	1.54	497	356
<u>2. By road (200 km)</u>						
a) <u>Export</u>						
1. Ground-nuts	39.3	7.9	2.87		230	
2. Vegetable oils	7.4	1.4	2.87	-	40	-
3. Other	0.5	0.1	2.87	-	3	-
Total	47.2	9.4	2.87	2.87	273	273
b) <u>Import</u>						
1. Other	20.1	4.0	2.87	2.87	115	115
Total	20.1	4.0	2.87	2.87	115	115
Total via Nigeria	67.3	90.8	2.68	2.00	2,396	1,772

	Volume in '000 metric tons	Transit in mil- lion ton-km	Rate per ton-km in ¢		Cost of transit in '000 \$	
			General rate	Transit rate	At gene- ral rates	At tran- sit rates
<u>C. Via Ivory Coast</u>						
<u>1. By rail (1,145 km)</u>						
a). <u>Export</u>	-	-	-	-	-	-
b). <u>Import</u>	-	-	-	-	-	-
1. Other	3.2	3.7	2.50	2.95	93	109
Total	3.2	3.7	2.50	2.95	93	109
<u>2. By road (530 km)</u>						
a). <u>Export</u>	-	-	-	-	-	-
b). <u>Import</u>	-	-	-	-	-	-
1. Other	3.2	1.7	10.0	10.0	170	170
Total	3.2	1.7	10.0	10.0	170	170
Total via Ivory Coast	3.2	5.4	4.68	5.17	263	279
Grand total	151.2	157.2	3.19	2.47	4,975	3,841

Notes

1. The distribution of goods between Niger-Est and Niger-Ouest may be calculated for 1962 as follows (according to the figures for 1960/61).

	1960-1961				Total '000 tons	1962	
	'000 tons		percentage			of which	
	Niger- Est	Niger- Ouest	Niger- Est	Niger- Ouest		Niger- Est	Niger- Ouest
1. Ground-nuts	24.0	9.0	73	27	30.3	22.1	8.2
2. Other export	1.7	0.2	89	11	1.4	1.3	0.1
3. Petroleum products	1.3	15.1	8	32	21.1	1.7	19.4
4. Cement	5.1	7.0	42	58	17.1	7.2	9.9
5. Other imports	11.2	7.9	59	41	10.8	6.4	4.4
Total	43.3	39.2	53	47	80.7	38.7	42.0

For the calculation of average rates see separate table attached.

2. The donation paid by the "Organization Commune Dahomey - Niger" depends on the kind of goods but not on the mode of transport. So the average rate for each commodity is shown against the rail and road parts of the Dahomey route.
3. The rates for transit through the Ivory Coast and the Upper Volta by rail are from letter No. 435-EX/C of 16 February, 1965 received from the Régie du chemin de fer Abidjan-Niger, and that for road transit through the Upper Volta - fr CFA 25 per ton-km (10¢) - from the Projet de plan quinquennal (1963-1967) Tome 2, page 248.
4. For railway rates for transit through Nigeria see separate table (attached).
5. The road rates for transit through Nigeria are taken from Communauté Economique Européenne. NEDECO-SEDES- Etude Economique de problèmes de transports au Niger et au Dahomey. Tome I p.107 bis.

of average rates on the Dahomey transit route applied to Niger external trade under Opération

CALCULATION

hiromdelle

	Volume in '000 metric tons	Rates per ton in fr CFA		Cost of transit in million fr CFA			
		Received from consign- ors	Paid to the haulers rail road	Received from consign- ors	Paid to hauliers		between of which between Parakou and Niger frontier destina- tion
					For rail between Cotonou & Parakou	For road between Parakou & the place of	
<u>Niger - Est (1,500 km)</u>							
1. Ground-nuts	22.1	8,720	2,300 8,000	192.7	50.8	176.4	55.5
2. Other exports	1.3	9,930	2,500 7,800	12.9	3.3	10.1	3.2
3. Petroleum products	1.7	8,500	3,360 8,150	14.4	5.7	13.8	4.4
4. Cement	7.2	6,500	3,320 8,650	46.8	23.9	62.4	19.7
5. Other imports	6.4	9,000	3,340 8,200	57.5	23.9	58.6	18.5
<u>Niger - Ouest (1,000 km)</u>							
1. Ground-nuts	8.2	6,100	2,650 3,640	50.0	21.8	29.8	15.7
2. Other exports	0.1	6,100	2,650 3,650	0.6	0.3	0.3	0.2
3. Petroleum products	19.4	10,750	5,130 11,900	208.8	99.5	230.1	121.0
4. Cement	9.9	7,000	4,220 4,600	69.3	41.8	46.5	24.4
5. Other imports	4.4	9,570	4,600 4,700	42.1	20.2	20.7	10.9

Source: Communauté Economique Européenne, Netherlands Engineering Consultants - NEDECO, Société d'études pour le développement économique et social - SEDES - Etude Economique de problèmes de transports au Niger et au Dahomey Annexes G-8 and G-14.

Notes: The cost of haulage by road between the Niger frontier and Parakou is calculated as follows:

Parakou - Niger - Est = 1,000 km  
Parakou - Niger - Ouest = 600 km  
Parakou - Niger frontier = 315 km

Consequently, the Parakou-frontier distance for traffic to or from Niger-Est accounts for 315:1,000 = 31.5 per cent; for traffic to or from Niger-Ouest it accounts for 315:600 = 52.5 per cent.

RATES  
per ton-km in ¢ on Nigeria Railways

	Kano- Baro 562 km	Average rate at the actual distance km      rate		Kano-Lagos 1,126 km
<u>Export goods</u>				
1. Ground-nuts	2.78	1,050	1.96	1.93
2. Ground-nut oil	3.94	1,120	2.20	2.30
3. Ground-nut cake	2.67	1,120	1.56	1.64
4. Cotton	5.45	990	2.63	2.54
5. Cotton seeds	2.31	965	1.42	1.35
6. Skins	4.35	1,120	2.44	2.54
<u>Import goods</u>				
1. Petroleum products	3.61	983	2.70	2.83
2. Cement	2.13	595	1.55	1.44
3. Flour	1.19	965	1.82	1.03
4. Textiles	2.30	930	2.23	1.76
5. Salt	2.42	965	1.59	1.60
6. Sugar	2.66	965	1.82	1.76

Sources:

1. The Kano-Baro and Kano-Lagos rates are taken from the Communauté Economique Européenne. NEDECO-SEDES Etude économique de problèmes de transports au Niger et au Dahomey. Annexes G-64.
2. The average rates are from The Economic Co-ordination of Transport Development in Nigeria, prepared for Joint Planning Committee, National Economic Council Federation of Nigeria. Stanford Research Institute, California, pages 80 and 90.

COST  
of transit for the external trade of Rwanda in 1962

	Volume in '000 metric tons	Transit in million ton-km	Rate per ton-km in ¢ General rate	Transit rate	Cost of transit in '000 \$ At general rates	At transit rates
<u>Via Uganda and Kenya</u>						
<u>1. By rail (1,210 km)</u>						
a). <u>Export</u>						
1. Coffee	0.7	0.85	1.72	1.15	15	10
2. Tin ore	0.7	0.85	1.74	1.47	15	12
3. Pyrethrum	0.4	0.48	1.71	1.44	8	7
Total	1.8	2.18	1.73	1.34	38	29
b). <u>Import</u>						
1. Petroleum products	9.5	11.51	3.03		349	419 <sup>a/</sup>
2. Flour	0.7	0.85	1.03		9	11
3. Salt	1.5	1.81	1.39		25	31
4. Edible products	1.0	1.21	1.77		22	27
5. Other	2.7	3.27	1.72		56	71
Total	15.4	18.65	2.47	-	461	559
<u>2. By road (430 km)</u>						
a). <u>Export</u>	1.8	0.78	5.60		42	42
b). <u>Import</u>	15.4	6.62	5.60		370	262 <sup>a/</sup>
Total via Uganda and Kenya	17.2	28.23	3.22	3.19	911	892 <sup>b/</sup>

Via Burundi and Tanzania

1. By rail (1,290 km)

a).	<u>Export</u>						
1.	Coffee	8.8	11.34	1.68	1.12	191	127
2.	Tin ore	2.4	3.10	1.68	1.42	52	44

	Volume in '000 metric tons	Transit in million ton-km	Rate per ton-km		Cost of transit in '000 \$	
			General rate	Transit rate	At general rates	At tran- sit rates
3. Other ores	1.0	1.29	1.01	0.75	13	10
4. Skins	0.4	0.52	1.52	1.30	8	7
Total	12.6	16.25	1.63	1.15	264	188

b). Import

1. Petroleum products	4.3	5.55	2.93	2.93	163	163
2. Flour	3.3	4.26	1.03	0.88	44	37
3. Cement	1.8	2.32	1.00	0.86	23	20
4. Edible products	2.8	3.62	1.57	1.47	57	53
5. Other	4.1	5.29	2.22	1.94	117	102
Total	16.3	21.04	1.92	1.79	404	375

2. By lake (210 km)a). Export

1. Coffee	8.8	1.86	3.71		69	
2. Tin ore	2.4	0.50	4.04		20	
3. Other ores	1.0	0.21	2.90		6	
4. Skins	0.4	0.08	3.88		3	
Total	12.6	2.65	3.71	-	98	98

b). Import

1. Petroleum products	4.3	0.90	4.14		37	
2. Flour	3.3	0.69	4.06		28	
3. Cement	1.8	0.38	2.76		11	
4. Edible products	2.8	0.59	3.97		23	
5. Other	4.1	0.86	3.83		32	
Total	16.3	3.42	3.87	-	132	132

	Volume		Rate per ton-km		Cost of transit in	
	in '000 metric tons	Transit in million ton-km	in / General rate	Transit rate	'000 \$ At general rates	At transit rates
3. By road (135 km)						
a). Export	12.6	1.70	15.0	-	259	259
b). Import	16.3	2.20	15.0	-	335	335
Total via Burundi and Tanzania	28.9	47.26	3.16	2.93	1,492	1,387
Grand total	46.1	75.49	3.19	3.02	2,403	2,279

#### Notes

1. The rates and distances on the railway part of the transit routes are taken from the East African Railways and Harbours Tariff Book No. 3 Part II. clause 350 (general rates) and clause 346 (transit rates).
2. The rates on Lake Tanganyika are from Compagnie des Chemins de fer du Congo supérieur aux grands lacs africains. Règlement et tarifs, Fascicule II, Tarifs, Supplement No.7.
3. The rates on roads inside Burundi are from the report of the United Nations Expert Mr. Antoine L'économie des transports au Rwanda et au Burundi en 1962 (page 3) and inside Uganda from the book Roads and Road Transport in an Underdeveloped Country. A case study of Uganda by E.X. Hawkins. Colonial Research Study No.32 page 97 (adjusted for 1962).
4. Import goods are not entitled to any discount on the route Mombasa - Kampala, but are granted "in transit" rates, if railed to Kasese. So the cost of transit at transit rates for import is that, calculated along the route between Mombasa and Kasese (1,550 km) and then from Kasese to the Rwanda frontier by road (300 km). See under "a" in the Table (559.0 + 262.0 = 821.0).
5. But practically all the transit of Rwanda goes via Kampala and so the total cost of transit at transit rates via Uganda and Kenya is calculated as follows: 29.2 + 460.9 + 42.4 + 369.8 = 902.3 (see under "b").

COST  
of transit for external trade goods  
of Uganda in 1962

	Volume in '000 Transit metric in million tons ton-km		Rate per ton-km in / General Transit rate rate		Cost of transit in '000 \$ At general At tran- rates sit rates	
<u>Via Kenya</u>						
1. By rail (1,088 km)						
<u>Export</u>						
1. Coffee	128	139	1.83	1.76	2,540	2,450
2. Cotton	33	36	1.43	1.39	515	497
3. Feeding stuffs	37	40	0.64	0.63	266	261
4. Ground-nuts	7	8	0.85	0.84	68	67
5. Cereals	11	12	0.85	0.84	102	100
6. Tea	5	6	1.52	1.45	91	87
7. Hides	5	5	1.46	1.40	73	70
8. Oil seeds	4	4	0.85	0.84	35	34
9. Copper	16	17	1.12	1.08	190	183
10. Other	7	8	1.71	1.51	137	121
Total	253	275	1.46	1.41	4,017	3,870
<u>Import</u>						
1. Aviation spirit	8	9	3.03	3.03	246	246
2. Motor spirit	64	70	3.03	3.03	2,100	2,100
3. Kerosene	30	33	2.23	2.14	735	708
4. Fuel oils	51	55	1.53	1.48	840	815
5. Salt	27	29	1.47	1.42	428	412
6. Iron and steel	14	15	1.85	1.79	278	268
7. Textiles	34	37	2.95	2.95	1,090	1,090
8. Fertilizers	9	10	0.55	0.51	55	51
9. Rice	3	3	2.26	2.17	68	65
10. Motor vehicles	7	8	0.79	0.78	63	62
11. Other	253	273	2.01	1.99	5,527	5,443
Total	500	542	2.11	2.07	11,430	11,260
Grand total	753	817	1.89	1.86	15,447	15,130

Notes:

1. The rates are taken from the East African Railways and Harbours Tariff Book. No. 3, Part II.

The General rates are the rates between Tororo and Mombasa (1,088 km).

The transit rates are those which are actually charged between Kampala and Mombasa, but adjusted for the distance only from the Uganda frontier to Mombasa (90 per cent of the total distance). The difference in the ton-km rate is due to the fact that in most cases the ton-km rates on the E.A.R. & H. become lower with increasing distance.

COST  
of transit for the external trade of the  
Upper Volta in 1962

1962

	Volume in metric tons	Transit in million ton - km	Rate per ton-km in ¢		Cost of transit in '000 \$	
			gen- eral rate	tran- sit rate	at gen- eral rates	at tran- sit rates
<u>Via Ivory Coast</u>						
<u>By rail (630 km)</u>						
a) <u>Export</u>						
1. Groundnuts	1.1	0.69	-	1.34	-	9
2. Vegetable oils	5.7	3.59	-	0.92	-	33
3. Other	3.9	2.46	-	1.30	-	32
Total	10.7	6.74	1.40	1.10	150	74
b) <u>Import</u>						
1. Petroleum products	30.2	19.0	-	2.54	-	482
2. Cement	27.1	17.1	-	1.82	-	311
3. Other	52.8	33.3	-	3.00	-	1,000
Total	110.1	69.4	2.90	2.59	2,000	1,793
Grand total	120.8	76.1	2.82	2.45	2,150	1,867

Notes:

- The rates are taken from the letter of February 16, 1965, No. 435/EX/c from the Régie du chemin de fer Abidjan - Niger. The transit rates are those between Abidjan and Koudougou (adjusted for the distance of 1,054 km) and the general rates are those between Abidjan and Ferkessédougou (for the distance of 561 km).

COST  
of transit for the external trade  
of Zambia in 1962

	Volume in '000 metric tons	Transit in million ton - km	Rate per ton-km in ¢		Cost of transit in '000. \$	
			gen- eral rate	tran- sit rate	at gen- eral rates	at tran- sit rates
<u>Via Rhodesia</u>						
1. <u>By rail (1,110 km)</u>						
a) <u>Export</u>						
1. Copper	520	577	1.77	1.77	10,220	10,220
2. Other	230	255	0.47	0.63	1,080	1,600
3. Total	750	832	1.36	1.42	11,300	11,820
b) <u>Import</u>						
1. Petroleum products	148	165	1.35	1.35	2,280	2,280
2. Other	123	136	1.04	1.69	1,410	2,300
Total	271	301	1.22	1.52	3,690	4,580
Grand total	1,021	1,133	1.32	1.45	14,990	16,400
<u>Via Mozambique</u>						
1. <u>By rail (430 km.)</u>						
a) <u>Export</u>						
1. Copper	520	224	1.77	1.77	4,100	4,100
2. Other	230	98	0.43	0.92	420	900
Total	750	322	1.40	1.55	4,520	5,000
b) <u>Import</u>						
1. Petroleum products	148	64	1.35	1.35	860	860
2. Other	123	53	1.11	3.58	590	1,900
Total	271	117	1.24	2.38	1,450	2,760
Total	1,021	439	1.36	1.77	5,970	7,760
Grand total	1,021	1,572	1.33	1.54	20,960	24,160

Source: Rhodesia Railways, the Official Railway Tariff Book, No. 29, clauses 247, 248, 249, 256, 257, 261, 262, 263, 264, 265.

COST

of transit for Zambia via Lorenzo Marques (1962)

Volume railed in 000 centals	Class on Rhoc- desia Rail- ways	Rate per 100 lb. in Shs		Cost of railage in '000 Shs					
		Lusaka- Malver- nia 924 m. clauses 248,249	Malver- nia- Lorenzo Marques 332 m. clauses 261,262 259,260	Total Lusaka- L.-M. 1,256 m clauses 263,264	Through rate for 1,256 m clauses 248,249	Total for 924 m clauses 634 m	On Rhodesia Railways through Rhodesia 332 m	On Mo- zambi- rail- ways 332 m	Total cost at through rates 1,256 m
6,600	Spec. b/	-	-	14.22	14.22	73,600	38,800	20,400	94,000
814	14	2.37	0.96	3.33	3.14	1,930	1,320	780	2,560
1,430	14	2.37	0.96	3.33	3.14	3,390	2,320	1,370	4,500
44	13	2.64	1.16	3.80	3.51	120	80	50	150
198	10	6.30	4.10	10.40	7.30	1,250	860	810	1,450
9,086						80,290	43,380	23,410	102,660
1,386	Tank <sup>o</sup> /	-	-	8.86 <sup>d</sup> /	8.86	9,050	6,200	3,250	12,300
110	10	6.30	4.30	10.40	7.30	680	470	460	800
66	10 <sup>a</sup> /	4.72	3.22	7.80	5.47	310	210	200	360
132	14	2.37	1.00	3.37	3.14	310	210	130	410
286	7	9.20	5.80	14.70	10.50	2,640	1,810	1,560	3,000
242	10	6.30	4.30	10.40	7.30	1,500	1,030	1,020	1,770
66	1	22.3	13.80	35.30	25.70	1,450	1,000	880	1,700
110	4	13.30	8.40	21.30	15.30	1,430	980	920	1,690
22	12 <sup>a</sup> /	2.56	1.14	3.70	3.31	60	40	20	70
198	6	10.20	6.60	16.40	11.70	1,980	1,360	1,260	2,320
2,618						19,410	13,310	9,700	24,420
11,704						99,700	56,600	33,100	127,000

Sources: Official Railway Tariff Book of Rhodesia Railways No. 29.

COST

of transit for Zambia via Beira (1962)

	Volume railed in 000 centals	Class on Rho- desia rail- ways	Rate per 100 lb. in Shs				Cost of railage in 000 Shs			
			Lusaka- Untali		Beira 198		On Rhodesia Railways		On Zam- babwe	
			1,061 miles	clauses	1,259 miles	for 1,259 miles	Total for 1,061 m Rhodesia 763 m	of which through rail- ways	1,259 m	Total cost at through rates
			248,249	254,255	252	248,249				
<b>Export</b>										
1. Copper <sup>e/</sup>	4,840	Spec. <sup>b/</sup>	-	14.22	14.22	14.22	60,100	34,300	8,900	69,000
2. Manganese	198	14	2.68	0.65	3.33	3.14	530	380	130	620
3. Zinc and lead	660	12	3.88	1.05	4.93	4.41	2,560	1,840	690	2,920
4. Tobacco	132	10 <sup>a/</sup>	5.02	2.55	7.57	5.47	660	470	340	720
5. Maize	1,056	14	2.68	0.65	3.33	3.14	2,840	2,040	690	3,320
6. Ground-nuts	286	13	3.01	0.80	3.81	3.51	870	630	230	1,000
7. Other	242	10	6.70	3.40	10.10	7.30	1,620	1,160	820	1,770
<b>Total:</b>	<b>7,414</b>						<b>69,180</b>	<b>40,820</b>	<b>11,800</b>	<b>79,350</b>
<b>Import</b>										
1. Petroleum products	1,870	Tank <sup>c/</sup>	-	8.86 <sup>d/</sup>	8.86	8.86	14,000	10,050	2,570	16,570
2. Sugar	132	10	6.70	3.70	10.40	7.30	890	640	490	970
3. Salt	88	10 <sup>a/</sup>	5.02	2.78	7.80	5.47	440	320	250	480
4. Wheat	154	14	2.69	0.68	3.37	3.14	410	290	100	460
5. Iron and Steel	330	7	9.80	4.90	14.70	10.50	3,240	2,320	1,620	3,470
6. Timber	308	10	6.70	3.70	10.40	7.30	2,060	1,480	1,140	2,250
7. Textiles	88	1	24.00	11.30	35.30	25.70	2,110	1,510	990	2,230
8. Chemicals	132	4	14.30	7.00	21.30	15.30	1,890	1,360	930	2,020
9. Cement	44	12 <sup>a/</sup>	2.88	0.82	3.70	3.31	130	90	40	150
10. Other	198	6	10.9	5.50	16.40	11.70	2,160	1,550	1,090	2,340
<b>Total:</b>	<b>3,344</b>						<b>27,330</b>	<b>19,610</b>	<b>9,220</b>	<b>30,940</b>
<b>GRAND TOTAL:</b>	<b>10,758</b>						<b>96,510</b>	<b>60,430</b>	<b>21,020</b>	<b>110,290</b>

NOTES

a/ Less 25 per cent.

b/ Copper is railed at a special rate EASH 284.5 per short ton from Mufulira (1,539 miles). The distribution of the rate between Zambia, Rhodesia and Mozambique is proportional to the respective distance (see letters of Rhodesia Railways of May 31, 1965, Ref. No. R.B. 43 and of November 9, 1965, Ref. No. R.B. 43).

c/ According to the same letters, fuel oil enjoys the 40 per cent discount and the average rate thus is about 1.48 cents per ton/km including a 10 per cent increase since the 1st of September 1962 or 1.35 cents per ton/km before this date. The distribution of costs by countries is made according to the distance.

d/ The distribution of rates between Rhodesia Railways and Mozambique Railways does not always quite represent the total.

e/ The rate is for the distance from Mufulira (1,539 miles).

DATE	TIME	LOCATION	WIND	TEMP	REL	SEA	WAVE	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE 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FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	WAVE DIR	WAVE PER	WAVE HGT	WAVE LGTH	WAVE FREQ	
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## ANNEX VII

AVERAGE COSTS  
of railage in Africa

IMPORT		EXPORT		IMPORT	
		million ton - km	cost in '000 \$	million ton - km	cost in '000 \$
1.	Burundi	28.3	294	85.0	1,511
2.	CAR	13.0	265	34.4	888
3.	Chad	11.4	209	73.5	1,920
4.	Malawi	16.5	615	25.9	1,380
5.	Mali	32.2	435	102.6	3,099
6.	Niger	68.2	1,364	48.4	1,165
7.	Rwanda	18.4	217	39.7	934
8.	Uganda	275.0	3,870	542.0	11,260
9.	Upper Volta	6.7	74	69.4	1,793
10.	Zambia	1,154.0	16,820	418.0	7,340
Total		1,623.7	24,163	1,438.9	31,290
Average rate in ¢			1.49		2.19

Source: Annex VI.

REV. 1974

AVERAGE COSTS  
of road haulage in Africa

	EXPORT		IMPORT	
	million ton - km	cost in '000 \$	million ton - km	cost in '000 \$
1. Burundi	-	-	-	-
2. CAR	0.7	39	2.7	156
3. Chad	11.2	514	58.6	2,984
4. Malawi	-	-	-	-
5. Mali	4.8	131	14.7	801
6. Niger	19.4	524	21.2	788
7. Rwanda	2.5	301	8.8	597
8. Uganda	0.05	-	-	-
9. Upper Volta	1.3	-	-	-
10. Zambia	0.001	-	-	-
Total	38.6	1,509	106.0	5,326
Average rate in ø		4.01		5.02

Source: Annex VI.

REV. 1974

AVERAGE COSTS  
of shipment by river/lake in Africa

	Mode of transport	EXPORT		IMPORT	
		million ton - km	cost in '000 \$	million ton - km	cost in '000 \$
1. Burundi	lake	4.6	149	13.8	530
2. CAR	river	31.5	390	82.0	1,365
3. Chad	river	31.8	404	56.8	973
4. Malawi	-	-	-	-	-
5. Mali	river	-	-	1.2	17
6. Niger	-	-	-	-	-
7. Rwanda	lake	2.7	98	3.4	132
8. Uganda	-	-	-	-	-
9. Upper Volta	-	-	-	-	-
10. Zambia	-	-	-	-	-
Total		70.6	1,041	157.2	3,017
Average rate in \$			1.48		1.92
of which on lake			3.38		3.86
on river			1.25		1.67

Source: Annex VI.