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European Imports of West African Tropical Hardwood Forest Products

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INTRODUCTION

The vast majority of tropical hardwood timber reserves are located in the developing regions of Southeast Asia, West Africa and South America. Many of the countries in these regions, faced with a shortage of foreign exchange and a lack of capital for developing manufacturing facilities, regard their tropical forest reserves as a natural resource for exploitation to generate export revenues.

In order to utilize these forest resources efficiently, long-term forest product export policies should be developed based on an understanding of the international timber market. Those responsible for developing national forest product export policies should:

- analyze the market to identify the importing countries involved and the types and quantities of forest products being imported;
- identify competing countries or regions exporting forest products to the same market; and,
- optimize the composition of forest product exports to maximize their economic return.

This paper focuses on the European market for tropical hardwood forest products imported from West Africa. West Africa is considered separately from Africa based on its dominance in the production and export of forest products. In 1986 West Africa accounted for over 99% of African hardwood log exports, over 95% of hardwood sawnwood exports, over 90% of veneer exports and over 75% of plywood exports. The four categories of forest products considered in this paper are: hardwood logs, hardwood sawnwood, veneer and plywood.

Europe and West Africa share a unique relationship that includes the trade of tropical hardwood forest products. First of all, several European countries have maintained strong economic ties with many West African countries following their independence from colonial rule. Secondly, many West African timber species were first exploited and marketed by European timber companies. Finally, and perhaps most importantly, Europe is the primary market for West African forest products, importing over 70% of West African exports from 1977 to 1986.

Although this paper focuses on European imports of West African tropical hardwood forest products, to provide a complete description of this market it is important to understand the relationship that exists between the major supply regions with respect to the European import market. The primary supply regions of tropical hardwoods to Europe are Southeast Asia, West Africa and South America.

The paper begins by describing total European imports of hardwood forest products and presenting the share of this import market represented by tropical hardwoods. It next analyzes the share of the European import market held by each of the primary supply regions. It then examines the mix of forest products being exported from West Africa, as well as the nominal unit prices obtained for each type of forest product. Finally, the major importing and exporting countries for each category of forest product are presented.

THE EUROPEAN IMPORT MARKET FOR TROPICAL HARDWOODS

Figures 1-4 indicate that European imports of tropical hardwoods represent a significant portion of total European hardwood imports. This is particularly true with imports of logs and sawnwood, where tropical hardwoods represent approximately 50% of the total European hardwood import market. Imports of veneer and plywood, while less important, still account for 25% and 16% of the European import market, respectively.

Figure 1 presents the total volume of hardwood logs imported by Europe as well as the volume of tropical hardwood logs that are imported.

Figure 1 indicates that total European hardwood log imports increased from 1978-1980, decreased from 1980-1982 and remained fairly constant from 1982-1986. During 1977-1986 total hardwood log imports declined from 9.77 million m^3 to 7.12 million m^3. Tropical hardwood log imports followed the trend displayed by total hardwood log imports from 1977-1982 however, from 1982-1986 they decreased significantly. Tropical hardwood log imports decreased from 5.5 million m^3 in 1977 to 3.0 million m^3 in

1986. Tropical hardwood log imports, which represented 58% of total hardwood log imports in 1977, only accounted for 42% of total hardwood log imports by 1986.

Figure 2 presents the total volume of European hardwood sawnwood imports and the volume of tropical hardwood sawnwood imports. Figure 2 indicates that European hardwood sawnwood imports peaked in 1979 at 6.73 million m^3, decreased from 1979-1982 and gradually increased from 1982 to 1986. Over the 10-year period investigated, total hardwood sawnwood imports increased slightly from 5.5 million m^3 to 5.6 million m^3. Imports of tropical hardwood sawnwood follow the same trend displayed by total hardwood sawnwood imports, increasing from 2.6 million m^3 in 1977 to 2.9 million m^3 in 1986. During the 10-year period investigated, European imports of tropical hardwood sawnwood represented approximately 50% of total hardwood sawnwood imports.

Figure 3 compares total European imports of veneer with imports of tropical hardwood veneer. Data regarding European imports of veneer and plywood is not available by species and as a result, imports of both hardwoods and softwoods are combined. Total European imports of veneer peaked in 1980, at 704,000 m^3, decreased from 1980-1982 and increased from 1982 to 1986. Total veneer imports increased from 530,000 m^3 in 1977 to 669,000 m^3 in 1986. Tropical hardwood veneer imports display the same pattern as total veneer imports. The volume of tropical hardwood veneer imported by Europe increased from 132,000 m^3 in 1977 to 196,000 m^3 in 1986. During the period 1977 to 1986, tropical hardwood veneer imports represented approximately 25% of total European veneer imports.

Total European imports of plywood as well as European imports of tropical hardwood plywood are presented in Figure 4. Total plywood imports peaked in 1979 at 3.55 million m^3 and, following a decrease in 1980, remained fairly constant from 1980-1985. In 1986 total plywood imports increased sharply. Total plywood imports increased from 2.7 million m^3 in 1977 to 3.7 million m^3 in 1986. Tropical hardwood plywood imports from 1977-1986 generally followed the same trend as total plywood imports. During this period, the proportion of tropical hardwood plywood imports to total plywood imports remained at approximately 16%.

A sharp rise in tropical hardwood plywood imports was observed during the period 1984 to 1986 when they rose from 507,000 m^3 to 990,000 m^3. By 1986 European imports of tropical hardwood plywood represented 27% of total European plywood imports. The volume of tropical hardwood plywood imports increased by from 401,000 m^3 in 1977 to 990,000 m^3 in 1986.

PRIMARY TROPICAL HARDWOOD SUPPLY REGIONS FOR EUROPE

An analysis of the European tropical hardwood market by supply region and forest product type is presented in Figures 5-8. The upper curve in each figure is the cumulative total of the lower curves and represents the total volume of European imports from the three primary supply regions under consideration.

The European import market for tropical hardwood logs is presented in Figure 5. The vast majority of tropical hardwood logs imported into Europe originate from West Africa (over 97% in 1986). This is particularly true since a ban on the export of unprocessed logs by several Southeast Asian countries went into effect in 1980. As a result the market share held by Southeast Asia has declined from 14% in 1977 to less than 3% in 1986. Log exports from South America to Europe have generally been insignificant.

Figure 6 presents the European import market for tropical hardwood sawnwood by supply region. An analysis of the volume of tropical hardwood sawnwood imported by Europe from 1977-1986 indicates that the European market share held by each supply region has remained fairly constant. The data shows that Southeast Asia supplies approximately 75% of the European tropical hardwood sawnwood market followed by West Africa with approximately 20% and South America with about 5%.

European imports of tropical hardwood veneer by supply region is shown in Figure 7. Over the period studied, West Africa supplied approximately 80% of the European import market while Southeast Asia supplied just over 10% and South America supplied about 8%.

Figure 8 indicates the dominant position of Southeast Asia with respect to the European tropical hardwood plywood import market. In 1977 Southeast Asia supplied 78% of the tropical hardwood plywood to Europe and by 1986 this had figure increased to 82%. Over the same period the South American share of the market increased from 8% to 12%, as they replaced West Africa as the second largest supplier to Europe. West Africa saw its share of the European market decrease from 13% to 6%.

WEST AFRICAN EXPORTS OF TROPICAL HARDWOOD FOREST PRODUCTS

Figure 9 presents the total volume of forest products exported by West Africa, while Figure 10 presents the total value (in nominal $US) derived from the export of forest products.

Figure 9 indicates that the volume of tropical hardwood logs exported from West Africa declined substantially from 1977 to 1986. During this period, the volume of logs exported decreased by 41%, from 6.4 million m^3 to 3.8 million m^3.

Despite declining volumes of tropical hardwood log exports, export revenues actually increased by an incredible 82% from 1977 to 1980. However, export revenues dropped sharply in 1981 and continued declining through 1986. Tropical hardwood log export revenues decreased by 26% from 1977 to 1986 and by 59% from 1980 to 1986.

West African exports of tropical hardwood sawnwood decreased from 1977 to 1981 and increased from 1981-1986. For the entire ten year period studied, tropical hardwood sawnwood exports increased by 12%, from 652,000 m^3 in 1977 to 761,000 m^3 in 1986.

Export revenues derived from hardwood sawnwood exports increased from 1977-1980 and decreased from 1980-1982. Sawnwood export revenues began increasing in 1983 and continued increasing through 1986. Over the entire period, sawnwood export revenues in 1986 were 17% higher than in 1977 but were 20% lower than the revenues earned during the peak year of 1980.

Both veneer and plywood have been exported on a smaller scale than either logs or sawnwood. While exports of veneer increased by 31%, from 150,000 m^3 in 1977 to 196,000 m^3 in 1986, plywood exports remained fairly constant at approximately 75,000 m^3 per year.

Revenues derived from veneer exports peaked in 1980 and declined from 1980-1983. Veneer export revenues increased from 1983-1986, but by 1986 had not regained the level recorded in 1980. Revenues from veneer exports in 1986 were 29% lower than in 1980 but 53% higher than in 1977. Revenues from plywood exports generally increased from 1977-1984 (with the exception of 1979). However, export revenues decreased in both 1985 and 1986 and by 1986 they were 16% lower than in 1977.

An important aspect of both Figures 9 and 10 that should be emphasized is the large volume of tropical hardwood logs being exported in relation to other higher value-added forest products. In 1977, 6.4 million m^3 of tropical hardwood logs were exported against a combined total of .88 million m^3 of tropical sawnwood, veneer and plywood. By 1986 this imbalance had been reduced but was still quite pronounced (3.8 million m^3 vs. 1.04 million m^3).

The trends observed in Figure 10 indicate that the disparity between unprocessed log exports and processed forest products exports seems to be decreasing. For example, while log exports represented 79% of total forest products exports in 1977 they represented only 64% in 1986.

This disparity is also apparent when export revenues are considered. In 1986, 64% of West Africa's forest products export revenue was generated from log exports while 22% was derived from sawnwood exports, 9% was from veneer exports and 5% was from plywood exports.

Compare these percentages with those observed for a developed country such as the USA where log export revenues account for only 14% of total export revenue, while sawnwood export revenues represent 50%, veneer revenues represent 14% and plywood revenues represent 21%.

EXPORT UNIT VALUE OF WEST AFRICAN FOREST PRODUCTS

Figure 11 presents the export unit values (in nominal $US) of West African forest products. These unit values were obtained by dividing the total export revenue for a year by the total volume of exports for that same year. It can be seen that there is a considerable increase in the unit value of forest products as the level of processing increases. However, a higher unit value does not necessarily indicate a higher level of profitability.

The export unit value obtained for each category of forest product in 1986 was significantly lower than the export unit value obtained during the peak year of 1980. Since 1980 the export unit value of forest product exports decreased considerably (although the unit value of logs has increased by 18% since 1984).

In general, the export unit values of West African forest products increased rapidly from 1977 to 1980 followed by a decrease from 1980 to 1986. For the forest products investigated, the export unit value obtained for tropical hardwood logs and veneer increased from 1977 to 1986. The export unit value of sawnwood products in 1986 was about the same as in 1977, while the export unit value of plywood decreased considerably from 1977.

An analysis of the data indicates that the ratio of unit value for tropical hardwood sawnwood, veneer and plywood based on the unit value of logs, decreased sharply from 1984 to 1986. Sawnwood decreased from 102% to 70%, veneer decreased from 229% to 174% and plywood decreased from 433% to 240%. This trend may be attributed to the fact that while the unit prices of tropical hardwood logs increased by 18% from 1984 to 1986, the unit prices of tropical hardwood sawnwood and veneer decreased by 2% and the unit price of plywood decreased by 24%.

THE RELATIONSHIP BETWEEN EUROPE AND WEST AFRICA IN THE TRADE OF TROPICAL HARDWOOD FOREST PRODUCTS

Table 1 presents by country, a breakdown of the European market for tropical hardwoods from West Africa. The major importers of tropical hardwood logs are France, Italy, Germany and Spain. While these countries remained the major importers of logs throughout the period from 1977 to 1986, the volume of tropical hardwood log imports by each country decreased. The principal West African exporting countries are the Ivory Coast and Gabon.

France is the major importer of tropical hardwood sawnwood from West Africa although imports by Italy, Spain, Great Britain and Germany are substantial. Ivory Coast supplies the vast majority of the tropical hardwood sawnwood to Europe, approximately five times the volume of the second largest exporting country, Ghana.

Since 1977 France, Germany and Italy have provided the largest import markets for West African veneer. The principal West African veneer exporting countries are the Ivory Coast, Congo and Cameroon.

Finally, the largest European importer of West African plywood is France, importing more than four times as much as any other European country. In West Africa, Gabon produces the vast majority of the plywood exported.

SUMMARY

The European import market for tropical hardwood forest products has changed considerably over the past decade. This paper describes several important trends in an attempt to provide an understanding of these changes in the European import market. An analysis of the European import market data indicates that:

1) Tropical hardwood forest products comprise a significant portion of total European hardwood imports, representing approximately 50% of the hardwood log and lumber imports, approximately 25% of the veneer imports and approximately 16% of plywood imports.

2) European imports of tropical hardwood logs have declined while imports of tropical hardwood sawnwood, veneer and plywood have increased.

3) West Africa is the principal supplier of tropical hardwood logs and veneer to Europe, providing over 95% of the tropical hardwood logs and approximately 80% of the veneer imported.

4) Southeast Asia is the principal supplier of tropical hardwood sawnwood and plywood to Europe, providing approximately 75% of the tropical hardwood sawnwood and approximately 80% of the plywood imported.

5) Europe imports over 70% of the tropical hardwood forest products exported by West Africa.

6) In terms of both volume and value, tropical hardwood logs represent the single largest category of forest product exported from West Africa, followed by sawnwood, veneer and plywood.

7) The volume of tropical hardwood logs exported by West Africa, as a percentage of total forest product exports, has decreased considerably since 1977.

8) Plywood displayed the highest unit export price followed by veneer, sawnwood and logs. While the unit export price of all West African forest products has decreased considerably since 1980, the unit export price of tropical hardwood logs has increased since 1984.

TABLE 1. Major West African exporting countries and European importing countries of tropical hardwood forest products.

		PRIMARY EXPORTERS		PRIMARY IMPORTERS			
Sawlogs and veneer logs (1,000,000 m^3)	1977	Ivory Coast (2.5)	Gabon (1.4)	France (1.1)	Italy (1.1)	Germany (0.72)	Spain (0.7)
	1981	Ivory Coast (2.1)	Cameroon (0.4)	France (1.5)	Italy (1.2)	Germany (0.62)	Spain (0.58)
	1986	Ivory Coast (1.0)	Gabon (0.6)	France (0.8)	Italy (0.48)	Spain (0.48)	Germany (0.3)
Sawnwood (1,000 m^3)	1977	Ivory Coast (228)	Ghana (108)	Britain (96)	Germany (94)	France (92)	Spain (71)
	1981	Ivory Coast (155)	Cameroon (78)	France (174)	Germany (87)	Britain (69)	Spain (64)
	1986	Ivory Coast (250)	Ghana (56)	France (117)	Italy (103)	Spain (87)	Britain (55)
Veneer (1,000 m^3)	1977	Ivory Coast (32)	Congo (26)	France (28)	Germany (28)		
	1981	Congo (42)	Ivory Coast (36)	France (38)	Germany (34)	Italy (23)	
	1986	Ivory Coast (30)	Cameroon (23)	Germany (44)	France (42)	Italy (31)	
		Congo (20)					
Plywood (1,000 m^3)	1977	Gabon (27)	Nigeria (12)	France (35)	Netherlands (8)		
	1981	Gabon (38)		France (39)	Germany (4)		
	1986	Gabon (25)		France (43)	Netherlands (8)		

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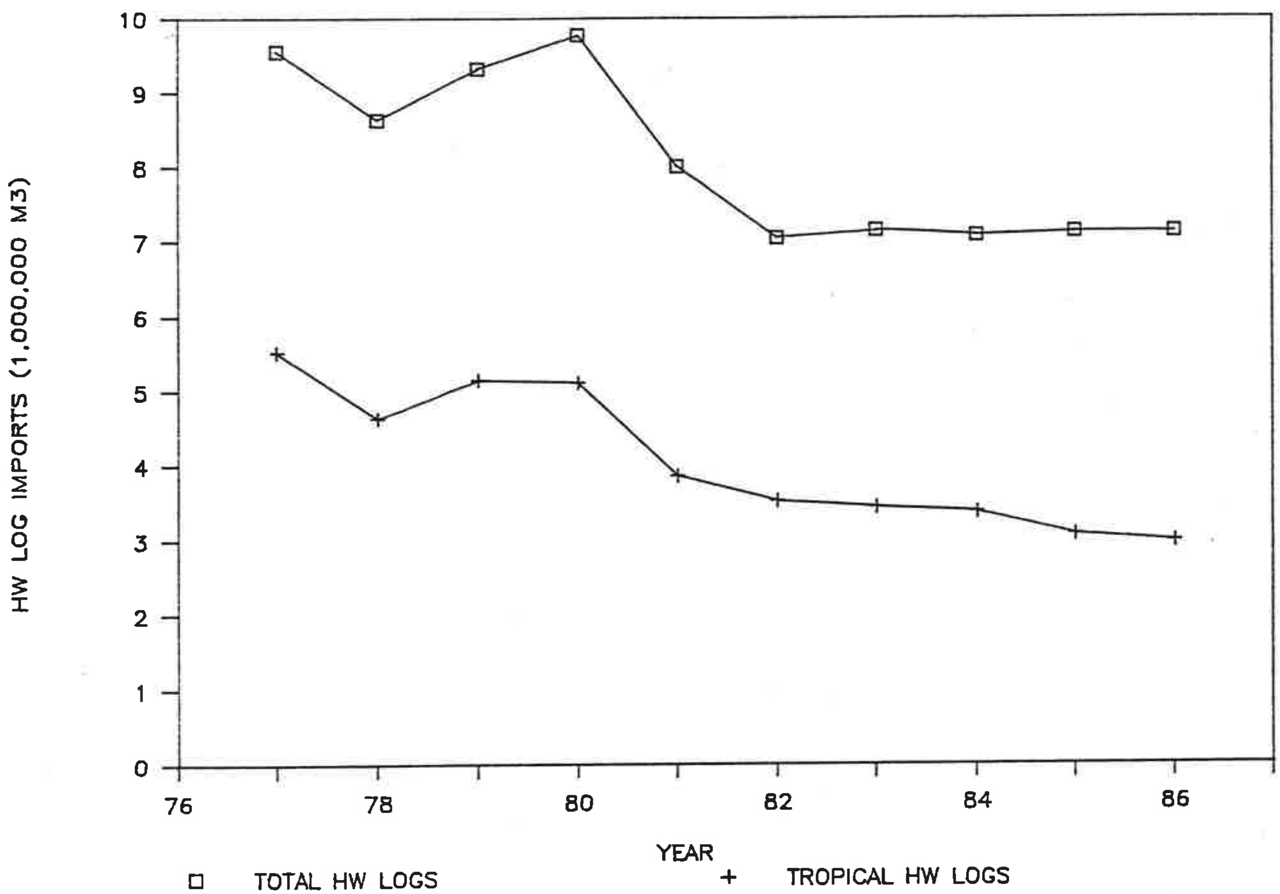

Figure 1. European imports of tropical hardwood logs in relation to total European hardwood log imports, 1977-1986.

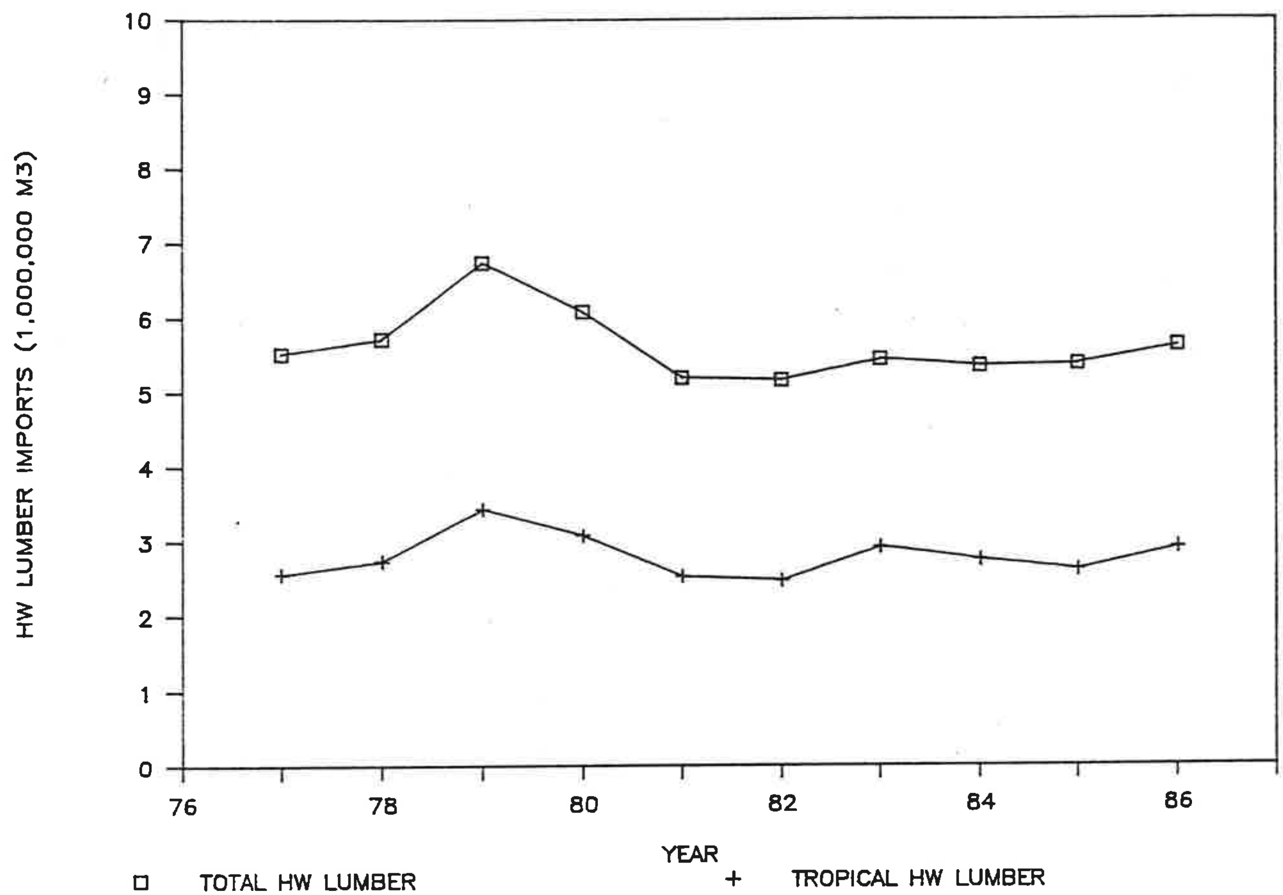

Figure 2. European imports of tropical hardwood lumber in relation to total European hardwood lumber imports, 1977-1986.

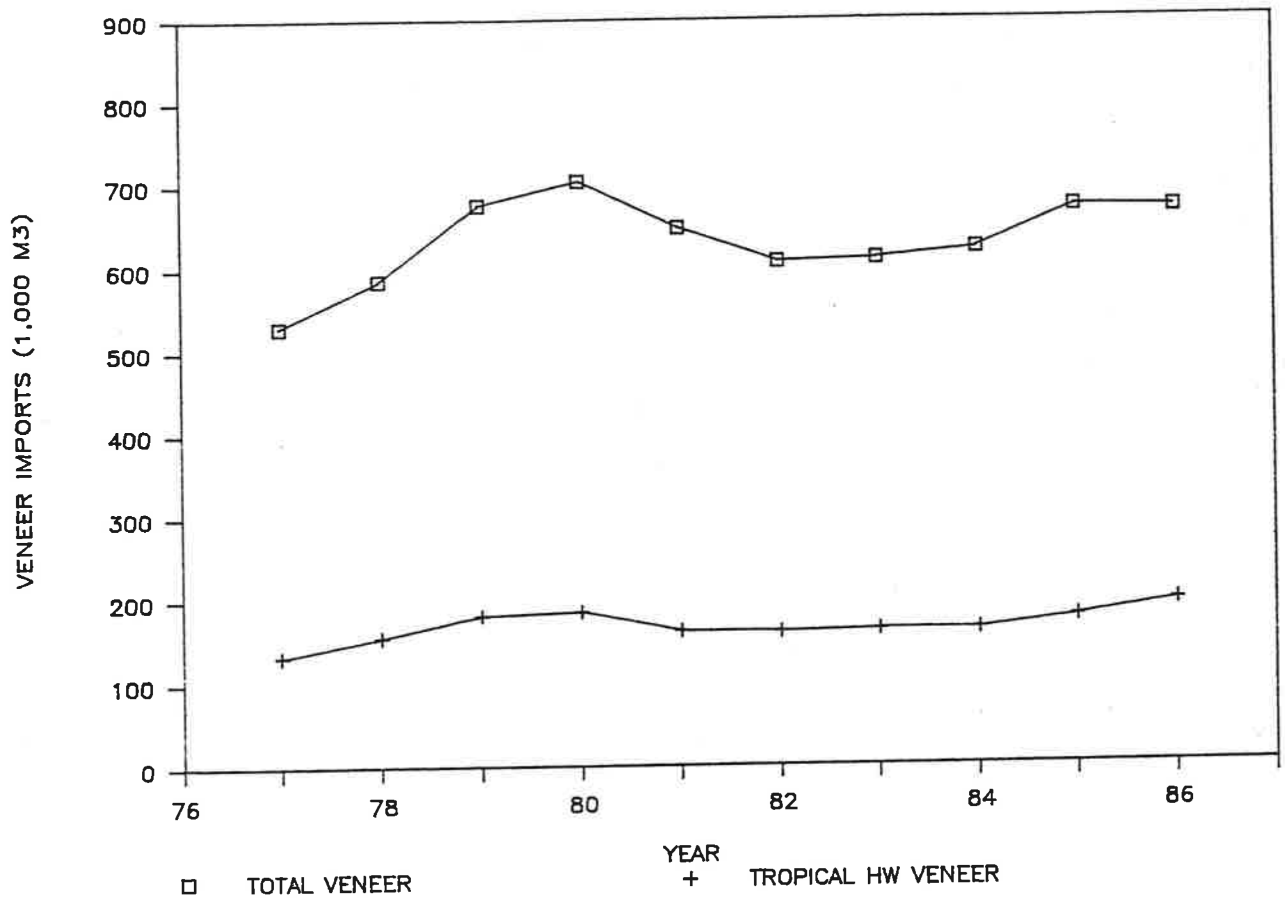

Figure 3. European imports of veneer from tropical regions in relation to total European veneer imports, 1977-1986.

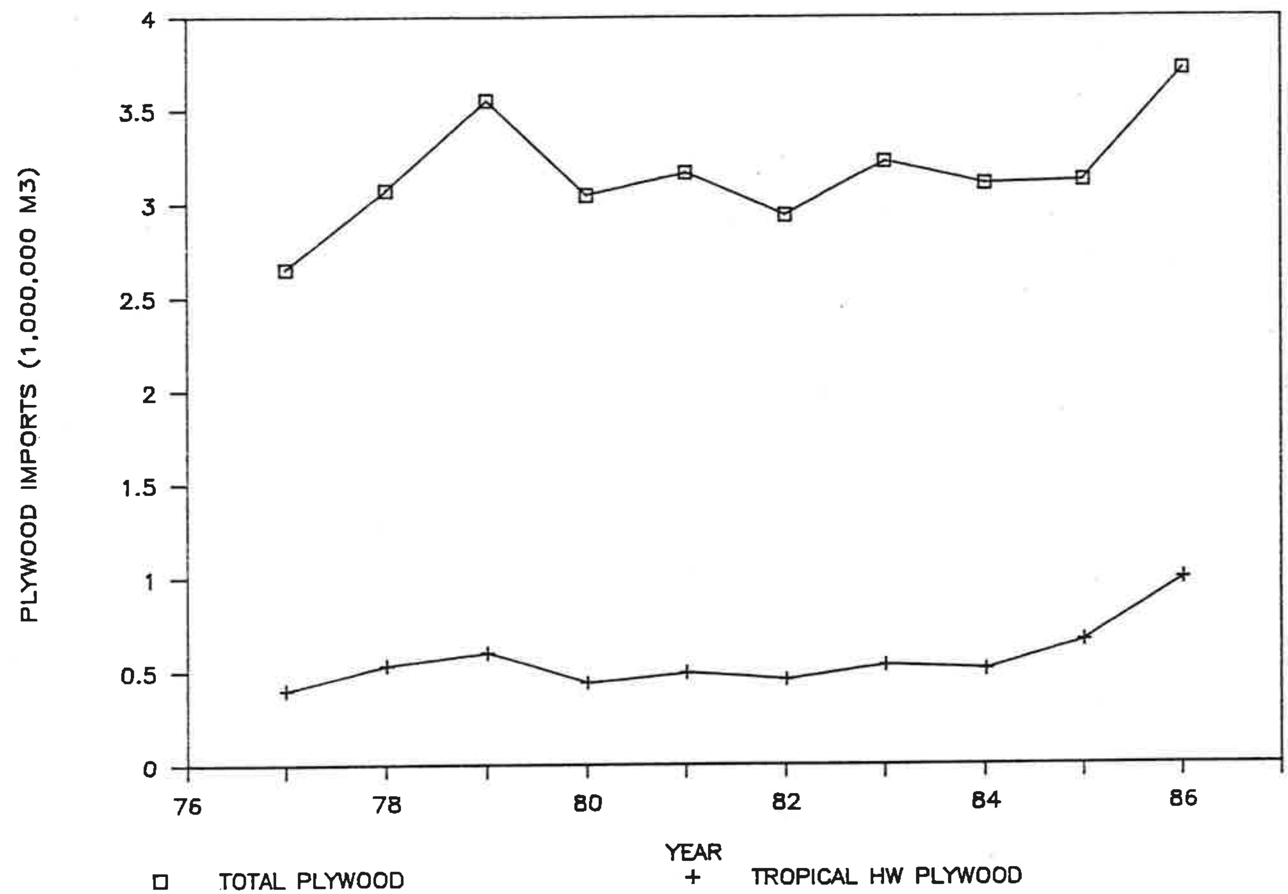

Figure 4. European imports of plywood from tropical regions in relation to total European plywood imports, 1977-1986.

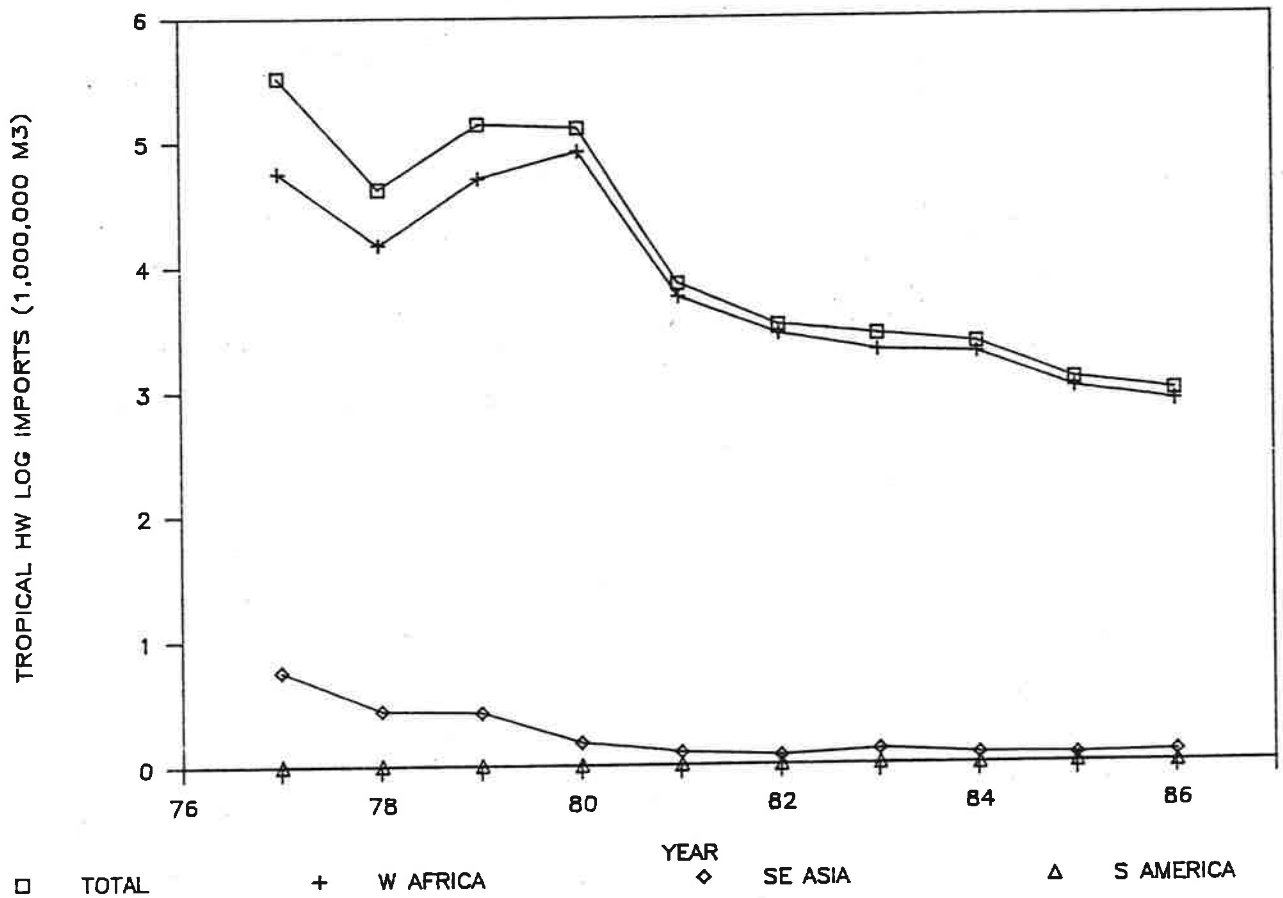

Figure 5. Cumulative European tropical hardwood log imports by supply region, 1977-1986.

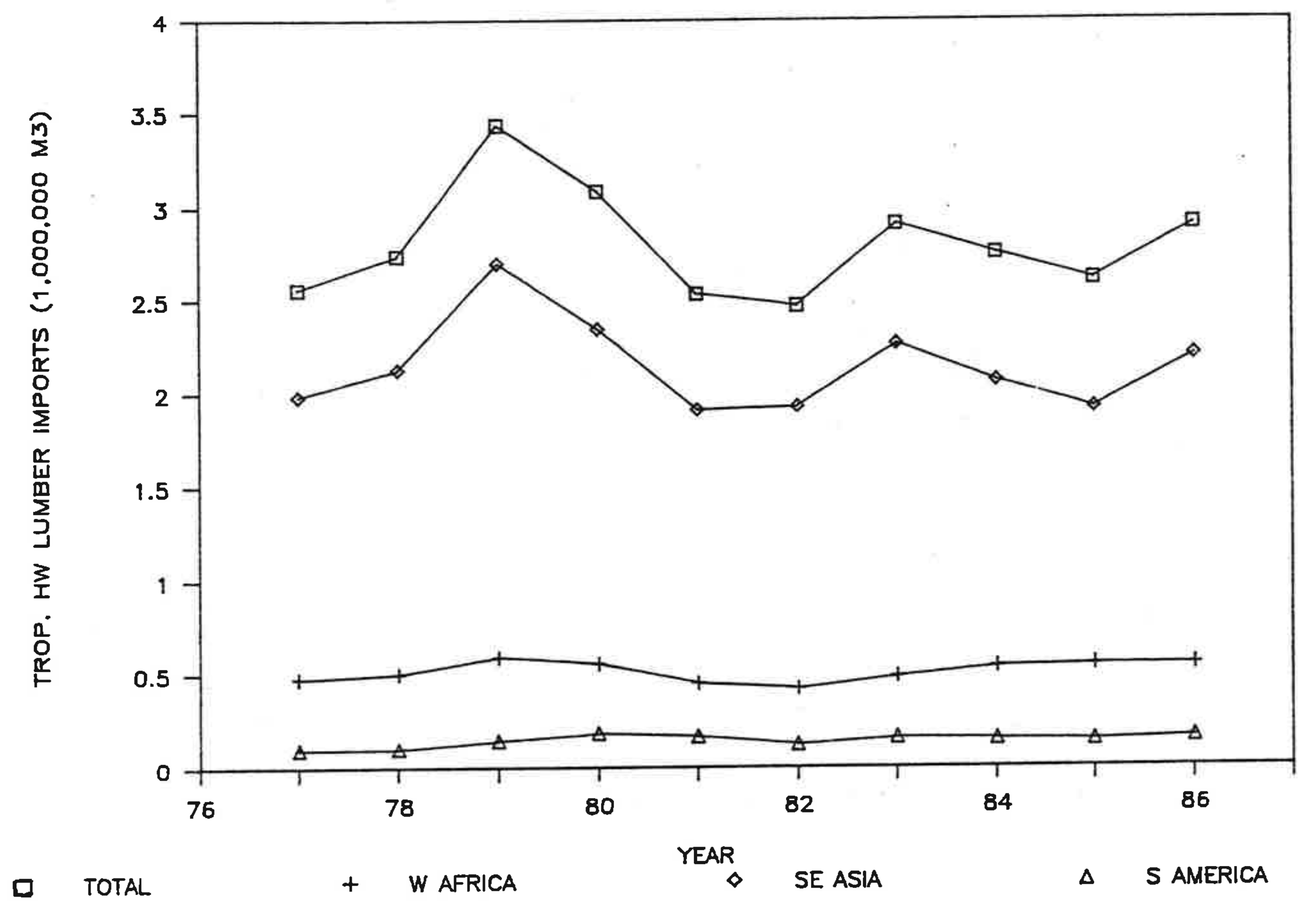

Figure 6. Cumulative European tropical hardwood lumber imports by supply region, 1977-1986.

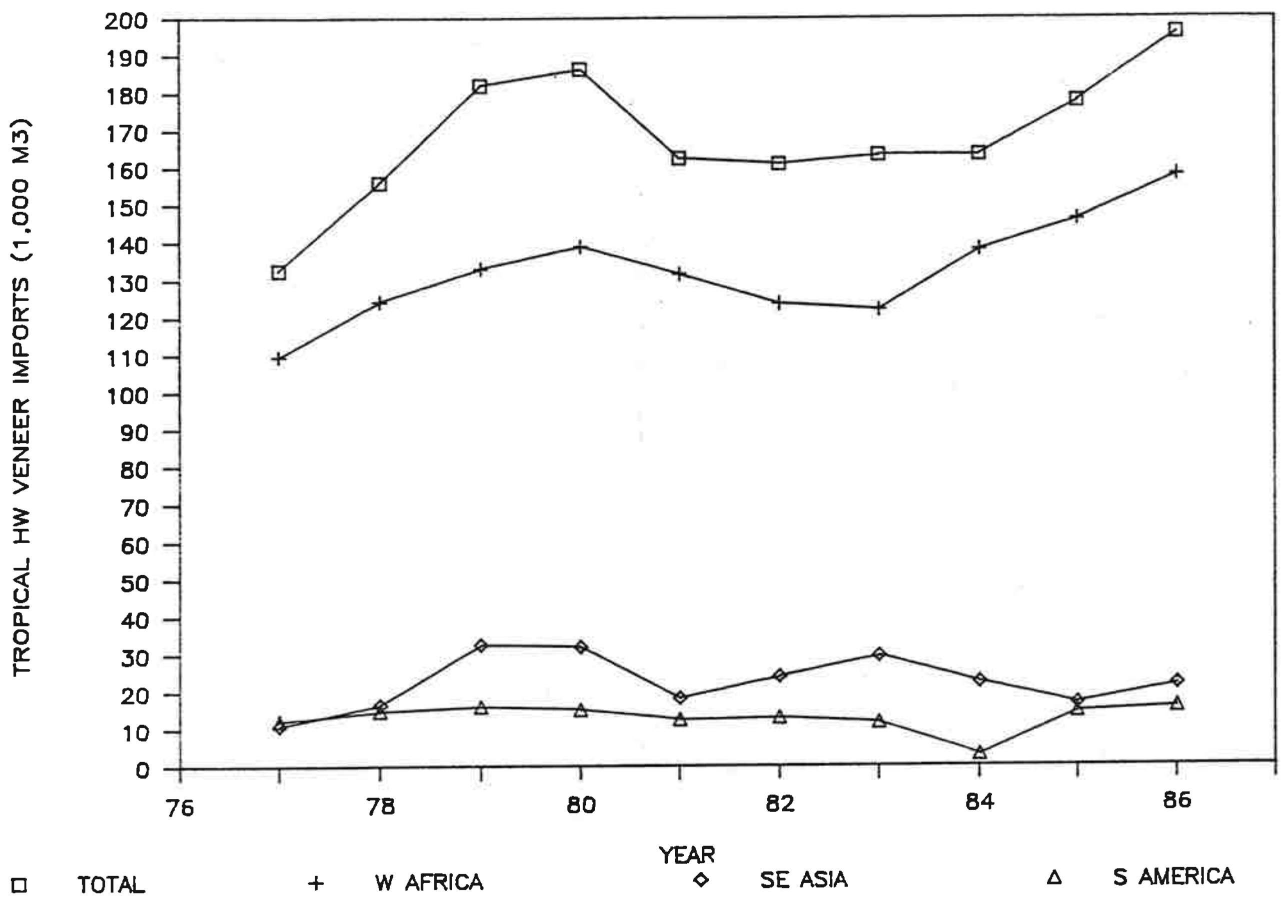

Figure 7. Cumulative European veneer imports by tropical supply region, 1977-1986.

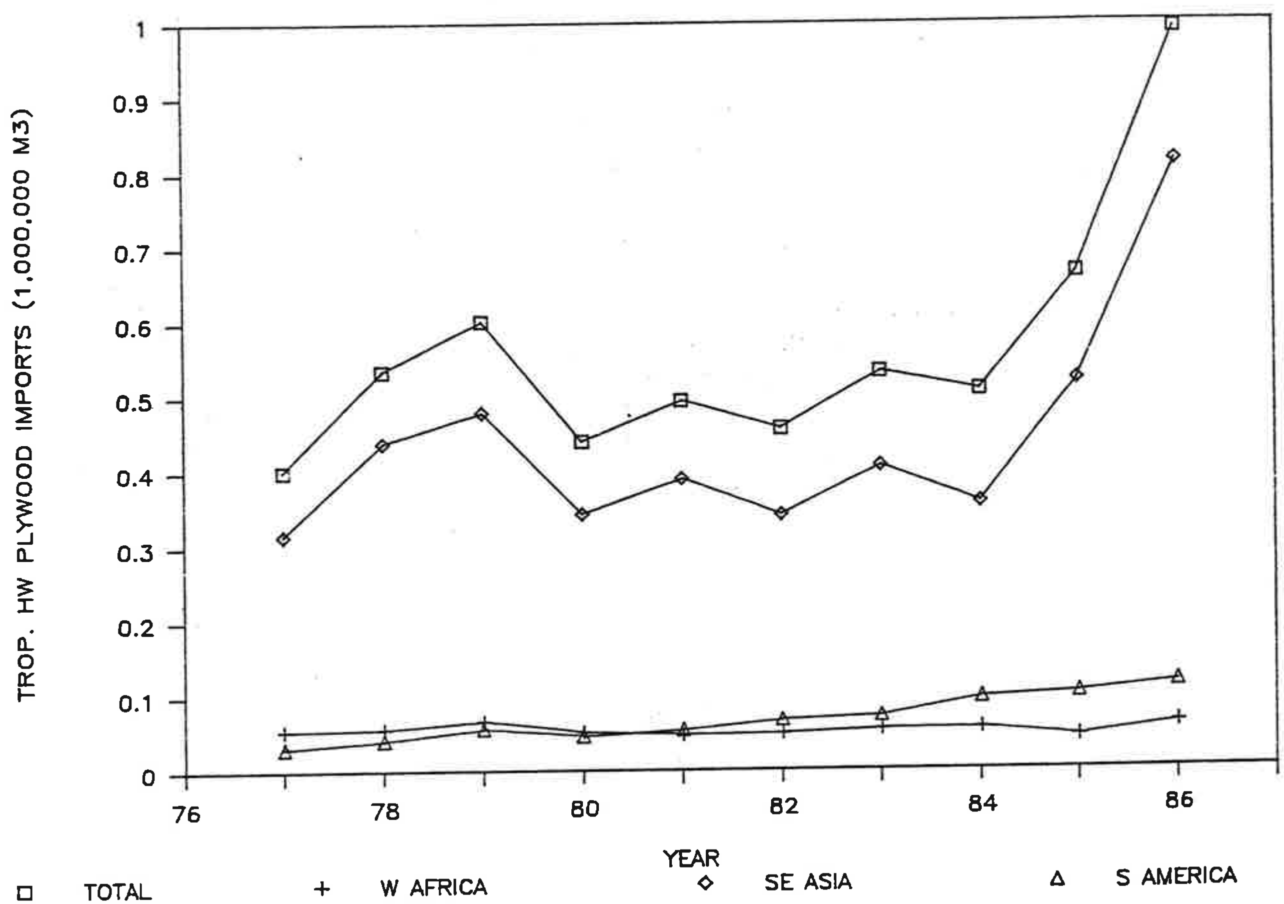

Figure 8. Cumulative European plywood imports by tropical supply region, 1977-1986.

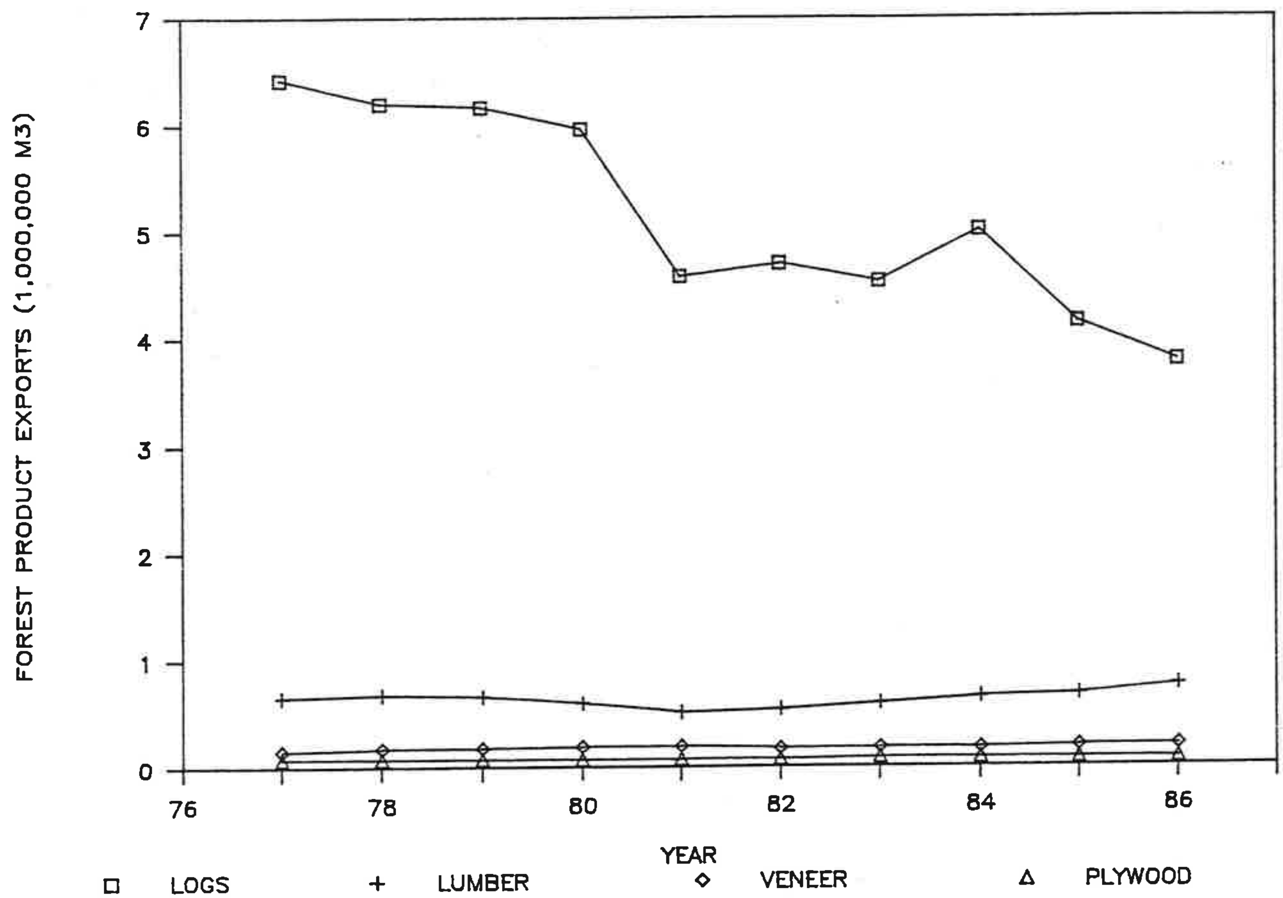

Figure 9. Volumes of West African tropical hardwood forest product exports by product type, 1977-1986.

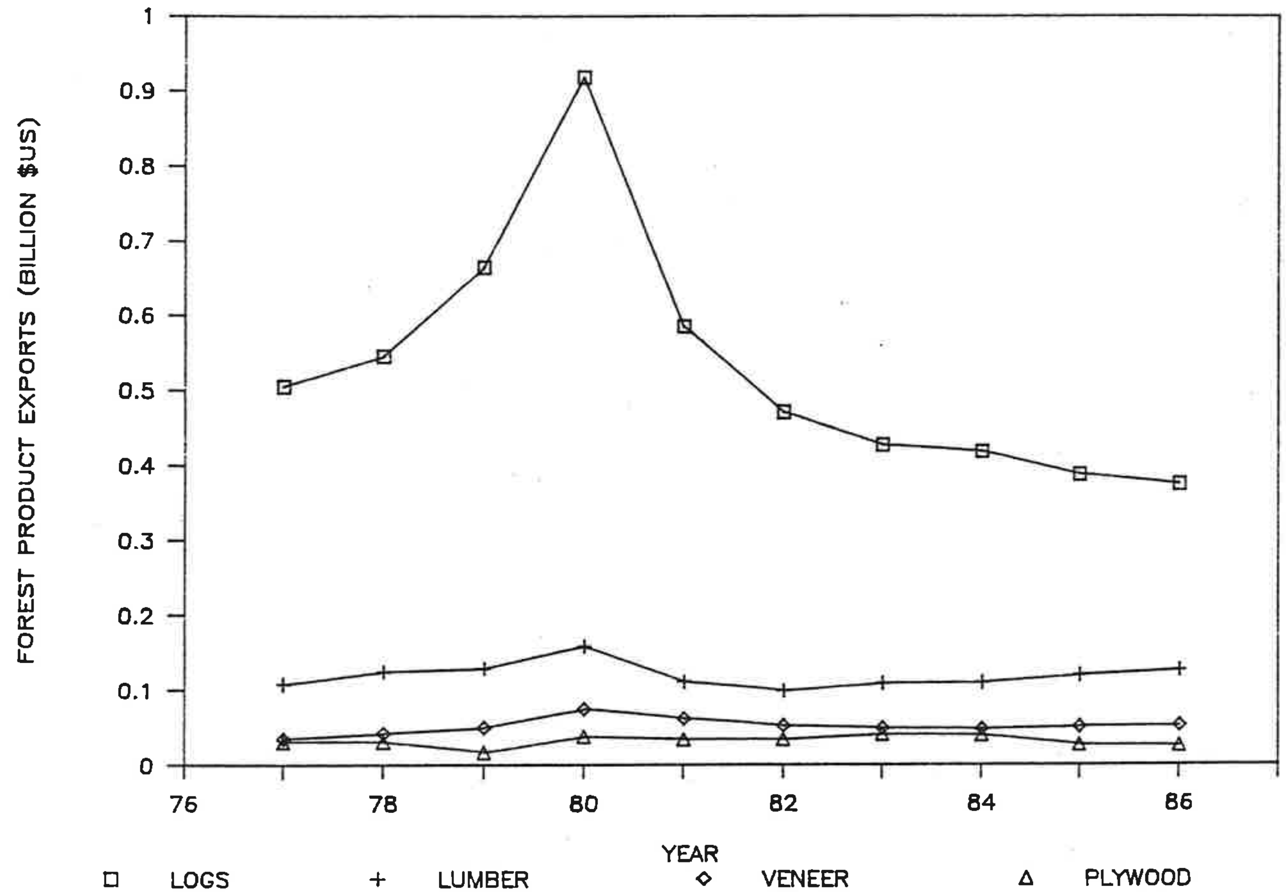

Figure 10. Nominal values of West African tropical hardwood forest product exports by product type, 1977-1986.

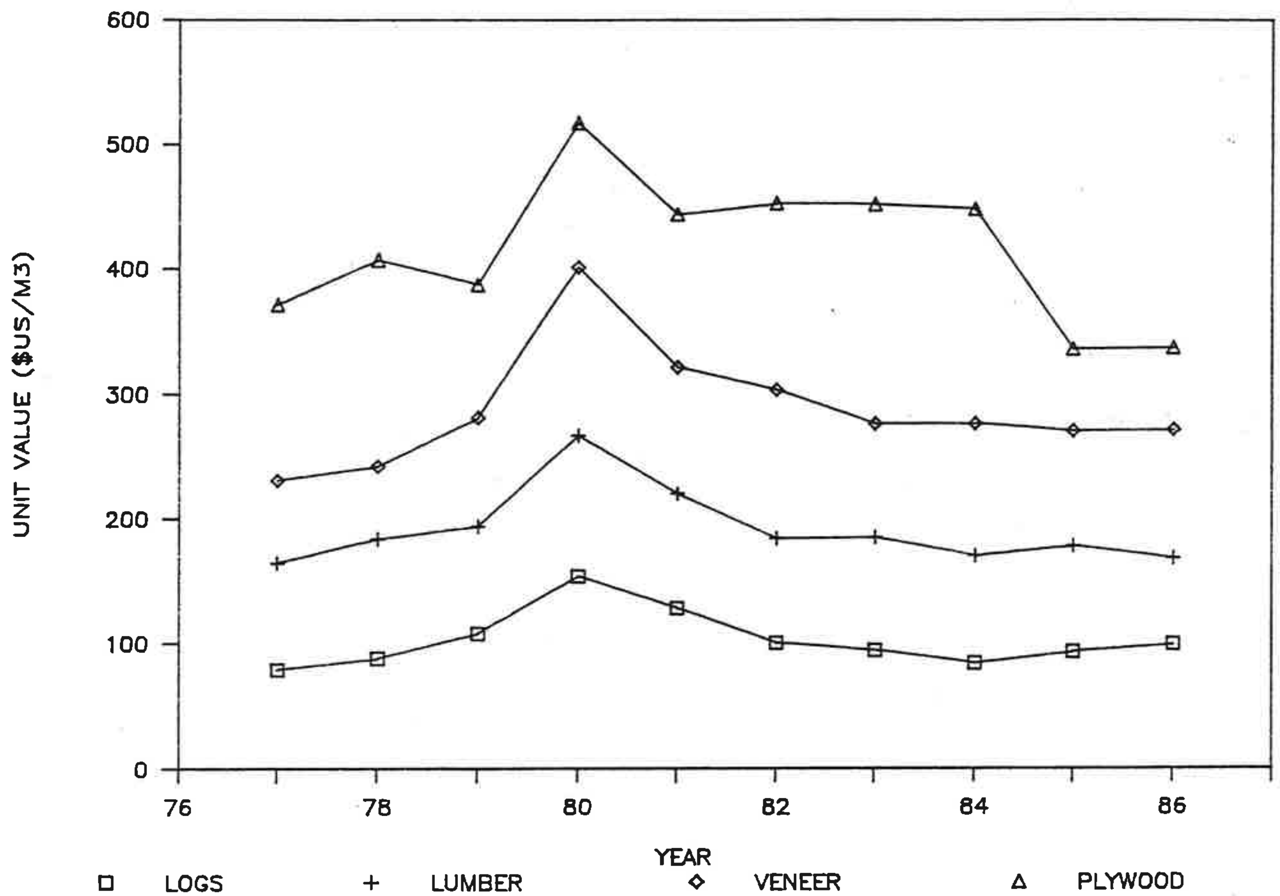

Figure 11. Unit value of West African tropical hardwood forest product exports by product type, 1977-1986.