# Why Do Prices Vary?

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*Over the past year prices paid to rural producers of coffee, cocoa and copra have varied considerably from month to month. These changes in prices puzzle many people and many growers have not understood why the price for their product changes so quickly.*

*This article attempts to explain how prices are fixed and why they go up and down. Coffee is used as an example but the same basic factors apply in determining the prices of tea, copra, rubber, cocoa and other commodities.*

## HOW THE MARKETING SYSTEM WORKS

To understand price variations it is first necessary to understand how produce like coffee is sold in the international market.

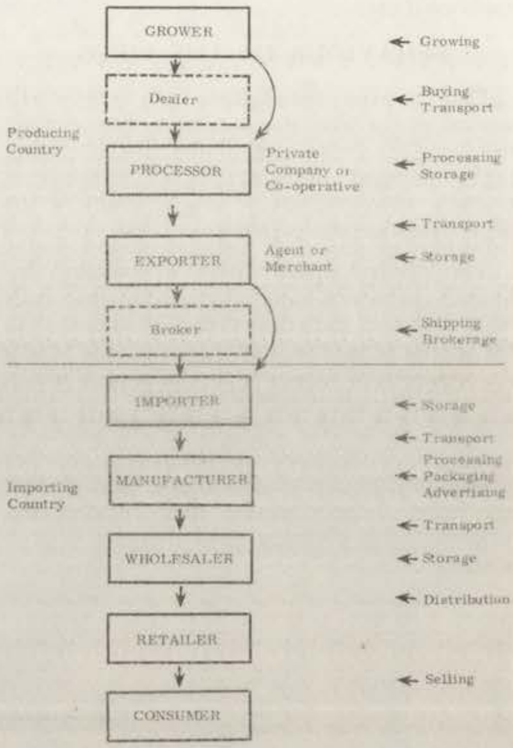
In a town market a grower of vegetables can sell his produce to the people who will eat it. However, parchment coffee produced by Papua New Guinea growers has to pass through many stages before it can be bought by a housewife as roasted and ground coffee beans or as instant coffee in a store in, say, Germany. There are many people involved in the work of processing, storage and transport of coffee to bring the coffee from the grower to the consumer. These different people, and the jobs they perform, are shown in *Figure* 1.

### 1. *The Processor*

The smaller coffee grower in Papua New Guinea usually sells his parchment or cherry coffee to a processor whose job it is to mill the coffee to a green bean form ready for export. This processor can be either an individual, a company, or a co-operative. Larger coffee growers usually process their own coffee. The coffee processor often employs buyers who buy the coffee from the smallholder growers. However, many processors buy parchment coffee from coffee dealers who in turn have bought the coffee from the growers.

Both the coffee dealer and the coffee processor incur costs in carrying out their functions A large cost for the coffee dealer or processor is that he needs money to buy from the growers. If he buys 1,000 tons of coffee in a year and pays 15 cents a lb for it, he will need over $300,000. If he borrows this money from a bank he has to pay interest to the bank for the money until he can sell the coffee and pay back the loan. He also has to buy trucks and pay drivers and office staff. The processor has to pay for machinery to mill the coffee and the men to operate the machines. He also has to pay for bags to put the coffee in and for a building to store the bags of coffee. As well he has to make a profit.

Figure 1. - Agencies in the International Marketing System




### 2. *The Exporter and the Broker*

The processor (or the grower/processor) usually then sells the green bean coffee to an exporter who in turn sells it to an importer or a manufacturer in an importing country.


*Plate* I.—Airfreighting is expensive, but in many cases it is the only way to get produce to the market

Photo: D.I.E.S.

overseas. Usually the importer of coffee in Papua New Guinea acts as a merchant which means that he actually buys the coffee from the processor and takes it into his own store for bulking, rebagging and storage. In few cases the exporter may act as an agent; in this case he doesn't own the coffee but takes it into storage and charges the processor a commission for arranging the sale to an importer overseas.

Sometimes the exporter does not know which importer or manufacturer in a particular overseas country wants the type of coffee that he has bought and wants to sell. In this case he will ask another agent (or broker) to arrange a sale for him. This broker may only arrange the sale "on paper" but he has costs and expects to make a profit and so charges the exporter for this service.

The exporter has to decide what price he can afford to pay processors or grower/processors for a particular quality of coffee. To work out what price to pay, he first estimates what price he is likely to receive from an overseas buyer. He then deducts from this price the costs of storage and the selling costs he incurs, together with the profit he expects to make. After he has considered all these factors he arrives at the price he should offer to the grower or processor.

### 3. *The Importer and Manufacturer*

The exporter in Papua New Guinea arranges shipment of coffee to an importer in an overseas country. The importer then arranges the sale and transport of the coffee to a manufacturer. He in turn processes the green bean coffee into roasted coffee or instant coffee in a packaged form. This packaged coffee is then sold and transported to a wholesaler, then to a retailer and is eventually sold to the consumer.

## FACTORS WHICH DETERMINE PRICES

The people who go to a broker to buy coffee always want to buy at a low price to spend as little money as possible to buy a certain amount. The people who are selling always want a high price so they can receive the greatest amount of money possible for their work. What factors decide what the price will be?

### 1. *Supply and Demand*

Generally the price for a particular quality of product varies according to two factors:

(i) *the demand* which is the amount that consumers want to buy;

(ii) *the supply* which is the amount that is produced.

If the demand is greater than the supply then the price will rise. This happens because many people are competing with each other to buy the coffee and the people selling can ask for higher prices.

If the supply is greater than the demand then the price will fall because producers in many countries will be competing with each other to sell their coffee and will have to reduce the price they are asking to ensure they sell their products.

If the supply and demand were exactly equal all the time then the price would never vary. But this does not happen in practice even though the International Coffee Agreement was drawn up to make sure that people don't grow far more coffee than is needed.

Thus the changes in price which worry so many people occur because supply or demand changes. It is more usual for supply to change suddenly than demand and thus we can say that variations in supply are usually the cause of price changes.

### 2. *Quality*

There are many different types and grades of coffee produced both in Papua New Guinea and other producing countries. Consumers and manufacturers in importing countries have their own special types or qualities of coffee they are prepared to buy. In this way some types or qualities of coffee will receive a higher price than others.

### 3. *Currency Variations*

International commodities sales are usually made in Sterling or U.S. dollars—rarely in Australian dollars. In December, 1972 Australia revalued its dollar upwards, while the U.S. dollar remained the same. Prices in U.S. dollars have not altered, but now those prices are lower when they are converted to Australian dollars.

## FACTORS AFFECTING SUPPLY AND DEMAND

### 1. *Production Performance*

Whatever the crop, the production in Papua New Guinea is very small compared with the production in the whole world, so it is production rises or falls in other countries which determine what the international price will be.

In the case of coffee, it is production in Brazil which determines what the world supply (and hence the world price) will be. When Brazil was having trouble with coffee rust, coffee buyers felt there would be less coffee available so the price rose. Then the price dropped again as people felt that more coffee would again be produced. This year the price has risen again because Brazil has had frosts and buyers thought the crop would be reduced considerably.

For copra and coconut oil it is the Philippines which is the world's largest producer. If they have cyclones or typhoons there, the supply of copra goes down and the international price goes up.

For tea, India and Ceylon are the world's major producers. Last year tea production in India dropped because of the war with Pakistan, and the price of tea on the international market rose.

If every country has a good year the price goes down. This happened with copra last year. Every country produced plenty of copra, and the price was the lowest for 40 years.

When supplies go down and the price rises, then growers produce more coffee. This happens because the growers are more willing to work at growing coffee when prices are high than when they are low. The result is that prices later fall again as the extra production comes on sale.

When supplies go up and the price falls, then producers become less willing to produce and supply is reduced so that prices rise again.

### 2. *Supply of Substitutes*

It sometimes happens that though there is no increase in the production of a crop, a substitute is found which has the same effect as increasing the supply.

For example, if someone discovers a way of making synthetic rubber that is better and cheaper than natural rubber, then the demand for natural rubber will fall. Similarly, for coconut oil, many of the uses of coconut oil are interchangeable, that is, if coconut oil is not available or costs too much, some other oil can be used instead. For soap manufacture the raw material can be coconut oil, palm oil or soya bean oil. So if the supply of coconut oil is suddenly reduced it may not mean that the price will increase. In this case soap manufacturers may buy some other oil instead.

If the price of coffee rises too high then people may stop drinking coffee and, instead, drink tea, cocoa, or some other drink.

### 3. *Temporary Disruption of Marketing Routines*

It often happens that something will prevent the normal marketing system from operating for a limited time. When this happens the effect is the same as for a change in the supply of, or demand of, the product.

One example will suffice. It has already been stated that the Philippines is the world's major producer of copra. Last year there was a serious dock strike in U.S.A. and Philippines copra growers could not deliver their copra to their usual markets in U.S.A. So instead they sold it on other world markets, thus reducing the prices there for the reasons given earlier about the effects of changes in supply on price.

### 4. *Release of Stockpiles*

Official agencies in some countries keep stockpiles of essential commodities for any of a number of reasons. They may want to safeguard against loss of supply as occurs, for example, during a war. They purchase at low prices and store for consuumption when prices rise. They may purchase surplus production from friendly producers to preserve political or strategic interests.

If a country with a stockpile decides it has too much of a commodity and it releases part of its stocks, the result is that supply is increased and the price declines. An example of this occurred last year when the U.S.A. released some of its stockpile of natural rubber and thus contributed to the factors which forced the price of rubber to a record low price.

### 5. *Stocks Held Already in the Consumer Country*

The international buyer has to assess what the sale of the commodity will be at the wholesale and retail level in his country. If he knows that too much coffee was bought last year and that wholesalers are still holding large quantities of coffee, he will certainly not buy more large stocks at high prices.

## INTERNATIONAL TRADE AGREEMENTS AND ORGANIZED MARKETING

The supply of many commodities sold on world markets and consequently their prices, are governed by a wide range of international

*Plate* II.—Produce is loaded into the hold of a ship bound for Europe

Photo: D.I.E.S.

trade agreements. Papua New Guinea, together with Australia, is a member of the International Coffee Organization (I.C.O.). Coffee-producing and coffee-importing countries are members of this organization which controls the amount of coffee produced in the world and regulates its sale. I.C.O.'s aim is to see that too much coffee is not produced and that prices received by coffee growers do not fall below reasonable levels.

At the time of going to press (December, 1972) the I.C.O's quota have been suspended but they could be re-introduced again in the future. Since Papua New Guinea coffee is mostly of high quality it is hoped that we will now be able to sell all the coffee we produce. Although quotas have been suspended, the PNG Coffee Marketing Board will still control and regulate coffee exports for the country. It will still buy any coffee that cannot be sold and will pay for its storage until it is sold.

To pay for these costs the Coffee Marketing Board gets money from a levy (or tax) on all coffee exported from Papua New Guinea.

There are other trade agreements which affect Papua New Guinea's exports. For example, Australia gives Papua New Guinea a special advantage over other coffee-growing countries: Australian manufacturers have to use 30 per cent of Papua New Guinea coffee in their processing. If they don't do this they have to pay special import duties or taxes on the coffee they buy from other countries.

## HOW THE PRICE TO THE GROWER IS DETERMINED

When coffee is grown in the Papua New Guinea Highlands the grower probably feels that he has done all the work and there is hardly anything else to be done. But a lot more people have to work before that coffee reaches, say, a shop in Germany where a housewife buys it. There are the people who process it, the people who work in the exporter's office, the crew of the ship that takes the coffee to the port in Germany, the broker who arranges the sale and the wholesaler and retailer in Germany. All these people have to work to help the coffee get to the family who will eventually make the coffee into a drink. All these people have to be paid. This is why there is a difference between the price the grower gets in Goroka and the price the housewife pays in Germany.

The importer or manufacturer in Germany knows what price his coffee must be if the housewife is to keep buying his coffee and not change to another brand of coffee or to another type of drink (such as tea). He has an idea of how much coffee is likely to be available from producing countries. The price he offers to the Papua New Guinea exporter is therefore based on what he feels he has to pay for the particular type of coffee and on his expected selling price less the cost of his operations, including profit.

The same process is repeated in the prices offered by the importers, then again by processors and coffee buyers until a final price to the grower is determined.

If there is a change in the likely amount of coffee available, then prices paid by importers to exporters will either fall or increase. As a result of this change the price to the grower will eventually fall or increase.