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MARKETING INSTITUTIONS IN INTERNATIONAL COMMODITY MARKETS

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International markets for the majority of agricultural commodities are extremely complex. They include public and private traders along with influences from domestic and international government policies. In recent years, the United States has experienced a decline in the market share in two of its major agricultural exports—rice and wheat. For example, at one time the United States had roughly 45 percent of the world wheat market; but, by the end of 1985, its share had dropped below 40 percent. Also, in terms of rice, the United States market share has dropped from 25 percent to below 20 percent.

The question arises as to whether the loss in the market share has anything to do with marketing institutions or whether this market share decline has more to do with government policy and agricultural productivity. I will compare and contrast the United States competitive position in both import and export markets. I first compare the wheat and rice markets where clearly southern agriculture has a major stake. A major difference in these markets is that a lively futures market exists for wheat, while such is absent in the rice trade. An analysis of the cotton market is also presented. Then, certain imported commodities which are of crucial importance to southern agriculture are discussed. I make brief comments on sugar and the importation of fresh winter vegetables. Sugar is clearly a concern for Texas and Louisiana, while fresh winter vegetables are of major concern to Florida.

Wheat

Government policies influence the wheat trade in many ways. *"They can use export subsidies to promote exports or tariffs and quotas to restrict trade; they can curtail production by the use of acreage controls or increase it by price supports; they can also influence price by direct involvement in the price negotiations between exporters and importers (that is, by state trading)"* (Schmitz et al., p. 23). However, in addition, the private trade is a key player along with government marketing boards. To illustrate a contrast, the Canadian Wheat Board is a producer marketing board and the sole seller of Canadian wheat for the export market; its sales to the Soviet Union are examples of state trading. In the United States, a few major private grain companies export the largest portion of United States grain. A sale by one of these private firms to the Soviet Union would be viewed as a private-to-government sale. In the United States, while cooperatives play a major role at the farm-collection level, they influence less than 20 percent of wheat exports. Once wheat leaves the country elevator, the majority of the wheat becomes the product of multinational grain companies.

The degree to which governments and boards are involved in international pricing of grains has been changing. Canada and Australia have been state traders since the interwar period; Argentina was a state trader until the mid-1970s but now relies on the private trade; and the United States, the European Community (EC), and Thailand rely on private traders. Thus, on the export side, the growing dominance of the United States means that the volume of grain trade originating in state-trading nations has declined. On the import side, the opposite is occurring. Traditional markets in Western Europe, which relied on private traders, have declined, while

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the importance of the centrally planned economies to the developing countries has increased. McCalla and Schmitz (1979a) estimated that the proportion of wheat that involves only private traders is small and declining, involving only 5 percent of the trade during 1973-1977. The reciprocal, of course, is that 95 percent of the world trade in wheat involves a state trader on at least one side of the transaction. Second, state trader-to-state trader transactions account for about one-third of the trade and this percentage seems to be fairly stable through time.

In spite of increased involvement in the pricing of wheat by governments and marketing boards, the private grain trade still plays a major role in the marketing of both wheat and feed grains, even for countries where state agencies dominate. The private grain firms, which are multinational in scope, carry out several functions crucial to the marketing of grain. For example, in Canada the private trade is involved since it carries out shipping and other activities related to getting the grain from Canada to importers. As McCalla and Schmitz (1979b) point out, the private grain traders act as agents to wheat boards in both Canada and Australia. In some cases, they merely carry out the marketing transactions after the board has negotiated a price with an importer. In other cases, they will make outright purchases from the board and resell this grain to importers.

Generally, state traders never become involved directly in the logistical terms of the grain-handling system. The Canadian Wheat Board, for example, sells principally on an f.o.b. basis leaving the importer to deal with the risks involving shipping, freight, and foreign exchange. Similarly, state trading importers typically buy on cost plus insurance and freight basis. This means that, in contractual arrangements involving a state trading exporter and a state trading importer, a middleman (usually a multinational grain firm) is almost always involved in at least the logistics of the trade. Second, a private trader buying grain from a state trading exporter, without a prior sales contract, has a large range of contractual variables on which to negotiate with importers, private or state. Thus, in these cases, considerable scope for price variation exists. In addition, the private sector is also heavily involved in carrying out the merchandising activity for United States government sales under P.L. 480.

Many people have questioned why farm cooperatives have not played a more significant role in the exporting of United States grain and why they turn much of their business over to the private sector. The following reasons are given: (1) lack of access to cooperative export facilities, (2) less risk in indirect sales, (3) better price, (4) economies of size, (5) lack of expertise, (6) unwillingness to coordinate, and (7) fear of the unknown. The main differences between cooperatives making direct export sales and the private trade are the cooperatives lack of: (1) a market intelligence system, (2) diversification, (3) multiple grain sources, (4) flexibility, (5) overseas facilities and sales offices, and (6) secrecy of operations. For example, lack of diversification of cooperatives means that they cannot spread the risks inherent in the exporting business.

Studies have been made in the international wheat market to determine the extent of market power by exporters and importers. McCalla has argued that the market is oligopolistic and that Canada is a price leader. Later, Alaouze et al. postulated a triopoly model of the world wheat market with Canada as a revenue-maximizing price leader. However, Carter and Schmitz argue that, if anyone has market power, it is the importer. They contend that importers follow an optimal tariff strategy in that they impose tariffs which, in essence, make importers better off than under free trade. They demonstrate this for the period prior to 1979 and clearly show the optimal tariff case for countries, such as Japan, and in the European Community. If nations follow an optimal import strategy through optimal tariffs, they are in essence, setting prices in the world market by behaving as monopsony buyers in international trade. If this theory is correct, exporters must seriously consider the extent to which they have been losing out on world trade because of the lack of market power.

A striking difference between multinational grain firms and producer marketing boards in a given country is that a given multinational grain company, unlike a marketing board, buys grain from many countries and sells grain to many countries. This gives the multinational grain companies an advantage over marketing boards in the marketing of grain since they have access to many sources of supply to meet export commitments. This raises the question of producer welfare at any point in time since, when the large com-

panies shop around for the best deal for themselves, their actions do not necessarily always benefit the producers in a country in which the parent company is located.

There is an active futures market in wheat and it is used extensively by private grain companies. It is used to a lesser extent by state traders on the importing side and is rarely used directly by marketing boards in exporting countries although, recently, Australia increased its involvement in United States wheat futures. However, Canada still uses the futures market indirectly. For example, the transactions it carries out with the private trade are generally hedged on United States futures markets.

Information is gathered from all sources and is revealed in futures market prices which are available to exporters, importers, producers, and the like. In a sense, one could argue that the futures market is the central pricing point in the international grain market. In a recent paper, Caves argued that the existence of the active futures market assures that the private grain trade is highly competitive. Whether or not this is the case is not debated here. What is more open to question is the extent to which futures markets give such trading nations as the Soviet Union, an advantage over exporters. Clearly, countries such as China and the Soviet Union have excellent information about the grain markets through futures markets activities since prices on these markets are quoted daily. However, major exporters, such as the United States, do not have a great deal of information on the Soviet Union other than through satellites, cooperative agreements, etc. Thus, one could argue that the information gained through futures markets is asymmetric.

In the wheat trade, one might wonder the extent to which the private trade deals mostly with private importers and the extent to which state traders deal with state traders. In the Canadian case, more and more of their exports are going to Communist countries. Therefore, in this case, state traders are increasing their involvement with other state traders. However, it may well be that private traders find those types of markets where the private trade on the importing side is very active.

The United States has been losing its market share in the world wheat market during the 1980s. People have contended that this is essentially due to United States farm policy and has nothing to do with grain marketing. It is generally held that the reason the United States market share is falling is due to a government loan rate which is set too high. Clearly, the 1985 Farm Bill has lowered the loan rate; therefore, if this has been the major factor determining market share in the world grain trade, the market share in the next year or two should increase substantially.

RICE

The trade in rice almost doubled between 1962 and 1984. The export side of the rice market is dominated by a few Asian countries and the United States while the import side is more dispersed geographically. The United States and Thailand are the two largest rice exporters, accounting for roughly 50 percent of the trade since 1980. Because of strong tastes and preferences, there is limited substitution between the various types of rice.

On an international basis, price data are not available by type of rice. The most commonly used world price is the Thailand export price for milled rice, 100 percent second grade (Grade B, f.o.b. mill, Bangkok). According to Slayton, the Bangkok f.o.b. price is not truly representative of the actual trading price. It is sometimes as much as 10 percent above the transaction price. Government involvement in the international rice trade has been extensive. In 1983, governments were active in 60 percent of total imports and 46 percent of total exports (Slayton). Only in the United States, Australia, Italy, Argentina, Uruguay, and Spain are exports left to the private trade. Government-to-government contracts are used extensively as trade instruments. More than 43 percent of rice exports by Thailand, Pakistan, and Burma in 1983 were via these arrangements.

The rice market can be characterized as thin, volatile, and risky. The lack of widely quoted actual trading price data adds to the trading risk. There is no common price quoted by type or quality of rice in the international market nor is there a commonly used grade standard. There is no world-recognized central futures market for rice. Thus, without the existence of any effective futures market, the trading risk is increased since traders are exposed to large profits or losses when there is no hedging (Stucker). In addition, the rice market is one where transaction costs are frequently high because of the need to search for supply sources (Siamwalla and Haykin). This search may entail costs to private

traders—for example, brokerage fees or time-lost cost to governments. In spite of the significance of state trading, the international rice markets support a number of brokerage houses in the United States, Singapore, Hong Kong, and Europe. Brokerage fees of 5 to 10 percent are not uncommon. These rates are significantly higher for rice than for wheat presumably because of higher search costs (Rastegari-Henneberry).

The United States world market shares dropped from about one-fourth of the total in 1980 to 16 percent in 1984 and 18 percent in 1985 while that of Thailand rose from 21 percent in 1980 to 34 percent in 1985, partly because Thailand exporters were selling at $170 to $200 per metric ton below the United States price (30 to 40 percent of the United States price). A strong dollar and a high loan rate for the United States have reduced the competitiveness of United States exports in international markets. Meanwhile, devaluation of Thailand currency and a reduction of controls over exports, especially export taxes, have made Thailand exports more attractive in foreign markets.

In the United States, rice exports under government programs (P.L. 480) have played a significant role in promoting United States rice exports (Stucker), but exports under P.L. 480, as a percentage of total United States exports, declined in 1976 and 1982 from over 44 percent to less than 12 percent. Although this market share is recovering somewhat, its role has not been as significantly as it was during the late 1970s. Thus, government involvement has significantly affected the United States rice market share. Also, political factors have influenced the market share where governments on a state-to-state trading basis are more reluctant to trade with certain countries than with others.

There has been a major shift in importers' sources of supply, especially in developing countries which constitute about 70 to 75 percent of world rice imports. African and Middle Eastern countries have increased their import share as a percentage of world trade, while Asian countries (South Korea and Indonesia, in particular) have decreased theirs since the 1970s. In the Middle Eastern markets, United States exports to Iran and Syria have also decreased as Thailand exports increased. These markets, clearly affected by not only economic but also political forces, have played a role in the decline of the United States market share. Political influence and political arrangements are also clearly correlated with the degree of state trading among nations.

How efficient is the world rice market? There is no easy answer. Clearly, information is a key to efficient marketing (Sarris and Schmitz,). Because of economies of scale in information gathering and the absence of rice futures markets, it is hypothesized that wide and volatile marketing margins exist for large rice trading firms.

COTTON

The Southern United States is a major world exporter of cotton (U. S. Foreign Agricultural Service; U. S. Department of Agriculture). Among the major producers are California and Texas. The marketing of cotton has many of the same elements present in the international wheat market. Cooperatives are engaged in the marketing of cotton internationally along with private traders. For example, Calcott is a major exporter of California and Arizona cotton and is a cooperative. It markets roughly one-half of the cotton grown in Arizona and California. Some of the major private players in the market also are those in the grain trade. These include Bunge, Cargill, and Continental Grain—Cargill markets through a subsidiary called Ralli and Continental markets through Conticotton in Fresno, California. The industry consists of many growers. Cotton from growers is handled by shippers, ginners, brokers, commissioned buyers, CCC loans, and cooperatives that, in turn, then deal with foreign mills. Cotton not placed under loan at harvest is usually sold to one of the following types of firms:

(1) merchant shippers who perform all functions involved in moving cotton from the producer to the foreign mill.
(2) cooperative marketing associations which act as shippers and represent producer members of the association and distribute any profits to producers.
(3) brokers or commissioned buyers who purchase cotton in country markets from producers or ginners and sell it to domestic mills on behalf of merchant shippers or large producers, and
(4) gin buyers who are usually gin owners supplementing their income by acting as a merchant shipper in that they take title to the cotton.

There is an active futures market in cotton in which many foreign buyers, e.g., Japan, hedge. In addition, the trade carries out hedging activities on the cotton futures exchange. In the total market, merchant shippers and the cooperative marketing associations handle the greatest part of each year's cotton crop both for domestic use and export. They handle approximately three-fourths of all United States cotton marketings. Most United States cotton exporters are members of either the American Cotton Shippers Association or the American Cotton Marketing Cooperatives. There are also active spot cotton markets located in such areas as Montgomery, Alabama; Phoenix, Arizona; Augusta, Georgia; and Fresno, California.

With futures and hedging by importers, it is hypothesized that the size of stockholding is affected as is its distribution. The exporter generally ends up holding the stocks. The importer needs to hold only minimal stocks since such firms can avoid risks by hedging on United States futures markets.

Interestingly, the export cotton market is such that not all sellers sell in all markets. Not every cotton exporter tries to sell in all export markets or offers all of the varieties produced in the United States. It is difficult and expensive to serve efficiently all of the 50 or more foreign countries that buy United States cotton. Some exporters, therefore, concentrate on certain foreign countries and others specialize in particular specialized market areas. Thus, one can think of marketing zones within the international cotton market where certain traders operate in specific zones and do not cross over into the several other marketing zones that exist.

Cotton is similar to wheat in that an exporter can either be a buying or selling agency and can make a commission strictly on sales. For example, a cooperative could make a sale to a major importer and have the private trade essentially carry out the marketing activities after the cotton leaves the farm gate. This is sometimes referred to as the merchandising part of the trade. Also, at times, a cooperative sells cotton directly to the private trade where the private trade then negotiates, in addition to merchandising, the final price for the cotton.

In recent years, the 10 largest markets for United States cotton have been Canada, China, Hong Kong, Indonesia, Italy, Japan, Korea, the Philippines, Taiwan, and Thailand. The United States' market share in world cotton grew substantially in the 1970s but lost ground in the 1984-85 period. Thus, the United States is losing its market share in cotton just as it has its wheat and other commodities described in this paper.

There are many United States and international cotton organizations which facilitate the trade. These include the National Cotton Council; the Cotton Council International; The American Cotton Marketing Cooperatives; Cotton, Inc.; the International Institute for Cotton; and the Committee for International Cooperation Between Cotton Associations.

In terms of United States export programs, P.L. 480 plays a major role. Under Title 1, the United States is authorized to sell cotton, cotton yarn, and unfinished fabric manufactured entirely from United States cotton on long-term credits. Because cotton is sold to many of the Communist countries around the world, much of the trade involves state trading at least on one side of the market transaction. This follows since countries, such as China, essentially have government buyers who are in charge of buying the commodity and carrying out the import activities. However, countries in Western Europe rely heavily on the private trade to carry out transactions. It is hypothesized that state trading agencies do a larger volume of business with United States cotton cooperatives than do private buying agencies in importing countries. As with wheat and rice, we hypothesize that private companies have a tendency to do business with other private companies and that state traders have a tendency to do business with other state trading agencies. Therefore, one could test whether or not this type of transaction, itself, leads to certain buying patterns and marketing rings in the international cotton market.

FRESH WINTER VEGETABLES

There is a significant trade of fresh winter vegetables between the United States and Mexico. The major southern producer participant on the United States side is Florida. Historically, Florida producers, through the courts, have brought dumping charges against Mexico in the fresh winter vegetable trade. The United States Departments of Commerce and the Treasury, in their initial investigations, ruled that dumping as perceived under United States law was not occurring (the 1978 Dumping Investigation). In the appeal,

Florida argued that dumping was occurring in that Mexican producers were selling vegetables below the cost of production. In the final analysis, the United States government ruled that dumping was not occurring; therefore, essentially, fresh winter vegetables are allowed to move into the United States market duty free (Schmitz et al.). This example provides an interesting case where marketing institutions may well have played and continue to play a major role.

At Nogales, many brokers exist who, in essence, represent or buy from vegetable growers and sell to United States and Canadian buyers. The structure of this wholesale market at Nogales is somewhat unknown in that there are many intermediaries that represent different interests. However, those brokers who do not represent Mexican growers certainly have it in their interest to have liberalized trade, large volumes of shipments, and price instability. Thus, to maximize profits for certain wholesalers, one would not argue for United States tariffs on Mexican vegetables, nor would wholesalers (except for those who represent Mexican interests) want to pursue cooperative United States-Mexican growers' strategies. Such cooperative strategies include voluntary quotas and marketing orders where economic rents to both Florida and Mexican producers can be maximized through either one of these means (Bredahl et al.). Free trade is, in essence, a competitive strategy where the rents of Florida producers are lower than they would be had a cooperative strategy been pursued. To pursue a cooperative strategy entails not only cooperation among Florida producers and Mexican producers but, in addition, intermediaries who carry out the trade. It is hypothesized that the type of intermediaries involved in international trade between Mexico and the United States greatly influences the type of outcome that is finally realized in international trade arrangements.

As with rice, there are no futures markets in fresh vegetables such as lettuce, cucumbers, etc. As a result, these are high-risk crops with imperfect markets. Growers generally cannot hedge their crop at the time it is planted.

SUGAR

The efficient functioning of the world and United States markets has been a controversial subject area for many years (Leu et al.). This is partly because it is an international market in which, perhaps, distortions are greater than in any other commodity. At the end of 1985, United States producer prices were roughly three-and-one-half times greater than world market sugar prices. This is, in large part, because sugar producers in the United States are highly protected through quotas. In addition, a larger percentage of the sugar trade involves state-to-state traders and, in certain cases, trade is blocked for political reasons. Cuba, for example, is considered to be one of the world's most efficient sugar producers; yet, it cannot export sugar to the United States market (Bates and Schmitz). In addition, although Cuba sells sugar to certain countries at the free-market or residual world price, it sells sugar to its ally, the Soviet Union, at much higher prices than the Soviet Union could buy sugar elsewhere. In part, the Soviet Union is financing activities in Cuba through its purchases of sugar at prices well above what Cuba could obtain for its sugar in other destinations.

There is an international sugar futures market from which is derived some notion of free-market or residual prices. Clearly, the United States users, such as Coca Cola, Pepsi Cola, and Mars chocolate, cannot buy sugar at these prices since the United States quota provision requires that the price of imported sugar roughly correspond to the United States producer price after certain adjustments are made for transportation, etc. Therefore, the role of sugar futures trading is not clear. While it does give some indication of either the surplus or deficit situation of sugar in residual markets, it clearly does not do a great deal (especially in a surplus market) to facilitate the import/export trade. For example, when the world price is at least three times below the United States price, it is doubtful whether or not Coca Cola would hedge on world sugar futures markets unless it expected free-market prices to exceed United States internal prices (at times in history, this has been the case). However, futures, especially the domestic futures, are used by companies to carry out the merchandising part of the trade.

Sugar represents a case where producers are highly protected, international trade is highly distorted, and the efficient functioning of a sugar market can be questioned. After state trading in sugar is carried out plus export dumping created by European Community subsidies, one is essentially left with a residual or free market in sugar where the

volume has to be less than one-third of international trade in sugar (Hoff and Lawrence).

Within the United States, there are also key players who are influential in dictating the outcome of the United States farm programs for sugar and, hence, its marketing. In the 1985 Farm Bill, the sugar policy was essentially unchanged from what it had been historically. Quotas are still the driving policy instrument for United States sugar producers, and sugar prices under the 1985 Farm Bill have virtually remained unchanged for United States producers. United States sugar users want a reduction of sugar prices since sugar represents an input to their production process. However, certain key players, including many sugar beet refineries, oppose the importation of sugar from abroad. Cooperatives that are involved in both producing and processing sugar beets support protection from imports since they want high prices for sugar for their producers. However, a refinery, which is involved strictly in the refining process, clearly wants a large volume of raw sugar regardless of its source; therefore, these types of refineries generally support free trade in sugar since, under this regime, they would have much more processing than currently is the case under quota protection. That is, they would prefer to process both domestically produced sugar and the large volume imported from abroad. In essence, the sugar beet producers and their integration through the refining process have a different objective in international trade and policy formulation than has a sugar refinery which does not own any production facilities at the farm level but, rather, merely refines sugarcane or sugar beets regardless of their source.

CONCLUSIONS

This study has described international commodity markets important to southern agriculture. Some of the markets contain futures markets as a price formation mechanism while others do not. Perhaps, those markets that do not contain futures are more inefficient than those in which futures markets exist.

It is hypothesized that government policy instruments, such as the United States target price and loan rates, and the price-support policy of the European Community create greater distortions in the international marketplace than do the inefficiencies created by marketing institutions. That is, even if markets are inefficient, the impact is probably far less than the impact that governments create. For example, in the United States one could hypothesize that multinational grain companies prefer an open high volume, highly unstable market since they are in the business of buying and selling commodities; the return to information is the highest for those types of markets. It would appear that they would support a policy of lowering the loan rate (which was the case in the 1985 Farm Bill), thus increasing the volume of trade. An increase in the loan rate would do the opposite.

It is interesting to read the numerous studies which have been done on analyzing the 1985 Farm Bill. Most of the attention was given to the impact of the United States government policies on farmers' income and the world grain trade. Essentially, no mention was made about the role of marketing institutions in international trade and how they support or do not support aspects of the 1985 Farm Bill. This is an area which is wide open to research and part of it would have to be examined within the context of rent seeking in international trade where major players are discussed, including producers, government marketing boards, and multinational grain companies.

In addition, our argument is that marketing boards or state traders easily facilitate the carrying out of monopsony power on the part of buyers. For example, the optimal tariff argument presented earlier is strengthened when a government or a group of governments can impose tariffs and have state traders import the commodity. Also, the question has to be explored as to the extent to which importers can exert market power because of asymmetric information. The hypothesis was raised, for example, that the Soviet Union probably has more information about markets from which they buy than vice versa.

In conclusion, cooperation is needed among major grain exporters—not increased competition. Many of the current marketing institutions are efficient in terms of textbook definitions. However, in being efficient, they create competition among major exporters. To overcome some of the trade barriers, perhaps less competition and more cooperation would be desirable.

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