THE INTERNATIONAL COFFEE AGREEMENT: AN ANALYSIS OF A SUCCESFUL CARTELIZATION EFFORT

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Thesis submitted to the Faculty of the
Virginia Polytechnic Institute and State University
in partial fulfillment of the requirements for the degree of

MASTER OF ARTS

in

Economics

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June 1987

Blacksburg, Virginia

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(ABSTRACT)

The first International Coffee Agreement (ICA) came into force on September 1, 1963 and established a system for regulating coffee exports and imports primarily by employing quotas to limit coffee supply. The ICA has been in existence since that time and is now in its fourth edition. The continued operation of the Agreement for nearly twenty five years is an apparent contradiction of economic cartel theory.

Two major areas related to the success of the ICA cartelization effort are the focus of this paper. First, the structure of the Agreement, especially the provisions for regulating exports and imports, is analyzed from the perspective of standard economic cartel theory. This analysis highlights several cartel mechanisms incorporated in the ICA. It concludes that the Agreement is soundly structured and allows for the successful cartelization of the coffee market by those countries which voluntarily participate in the ICA. However, this sound structure alone

does not explain the success of the coffee cartel because it cannot prevent countries from withdrawing their support of the Agreement.

The analysis then turns to the questions surrounding the continued endorsement of the ICA by both coffee producing and consuming countries. Political and economic motivations of the governments which support the Agreement and of the producers and consumers in these countries are discussed. Although some incomplete explanations for their support of the ICA are presented, several questions surrounding the economic reasoning of many parties to the Agreement, especially coffee consuming countries, remain unresolved.

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THE INTERNATIONAL COFFEE AGREEMENT: AN ANALYSIS OF A SUCCESSFUL CARTELIZATION EFFORT

I. INTRODUCTION

The coffee market has been influenced by an international coffee cartel since the International Coffee Agreement first came into force in 1963. At that time conditions in the coffee market, combined with the political interests of several major coffee consuming countries, led to the formation of the International Coffee Agreement (ICA). The primary objective of the ICA is the stabilization of prices for green coffee through a system of quotas applied to coffee exports from coffee producing countries.

The fact that the ICA is still in operation nearly twenty-five years after the first Agreement was implemented in 1963 appears to contradict standard economic theories which imply the inherent instability of cartels. This paper analyzes possible explanations of the extended success of the coffee cartel. Two major areas are examined. First, the structure of the cartel, as it has been established in the ICA, is presented in the terms of cartel theory. Second, the continued support of the Agreement by both exporting and importing member countries is discussed. Political reasons as well as perceived uncertainty in the international coffee market are included.

II. THE HISTORY OF THE INTERNATIONAL COFFEE AGREEMENT

In the years following World War II, demand for coffee increased as the European trade, which had been substantially reduced during the war, resumed. Stocks in producing countries had mounted during the war, so supplies were plentiful. The increased demand slowly depleted these stocks and prices were characterized by a gradual upward trend. However, the Brazilain coffee crop suffered extensive damage in 1954 when a severe freeze hit major growing regions throughout the country. This led to reduced supplies and sharply higher coffee prices. The retail price of coffee in the United States reached previously unheard of levels above one-dollar per pound.

The drastic increase in the price of coffee had two significant results.[1] Coffee consumers were discouraged by what were, to them, unacceptably high coffee prices. Consumption began to decline in Europe and the United States as consumers sought substitutes for their coffee "habit." Although there have been brief periods of increased consumption, the trend that began in the late 1950's has continued to the present time and worldwide consumption has declined significantly over the past thirty years.

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[1] C.F. Marshall, The World Coffee Trade: A Guide to the Production, Trading, and Consumption of Coffee (Cambridge: Woodhead-Faulkner, 1983), p. 106.

Producing countries, on the other hand, were encouraged by the higher prices and quickly took action to increase green coffee production. Trees which were planted as prices skyrocketed in 1955 took approximately four years to mature and produce quality coffee beans. The Brazilian crop had also recovered significantly from the frost damage by this time. So, despite the decline in consumption during the late 1950's, supplies were expanding during this same period due to earlier efforts to increase production. Production levels did not taper off as consumption declined. By the early 1960's the international coffee market was characterized by a steadily growing surplus and falling prices.

Many Latin American countries which relied heavily on coffee exports as a major source of income began to experience increased economic difficulties as a result of these developments. After attempts at short-term agreements between several Latin American coffee producing countries failed to improve their situation, a group of consuming countries, led by the United States, initiated discussions on the possibility of an international agreement.[2] As a result, the first International Coffee Agreement came into force on September 1, 1963. An essential premise of the Agreement was, and still is, the stabilization of green

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[2] Marshall, The World Coffee Trade, p. 107.

coffee bean prices through a system of quotas applied to producing countries. It is generally agreed that the motivation behind the establishment of and participation in the Agreement by consuming countries such as the United States was primarily political. The Agreement allowed these countries to indirectly subsidize many economically and politically unstable Latin American countries. Since the export of coffee was a crucial element of the Latin American country economies, the ICA was viewed as a means to achieve increased economic stability in these countries which, in turn, would help maintain their political stability.

Since the first Agreement in 1963 there have been three subsequent version; 1968, 1976, and 1983. Each of these Agreements has been a modified version of the prior Agreement. Each one has attempted to account for weaknesses in the preceding Agreement and changes in market conditions. For example, the 1976 Agreement established a more formal means of determining market share than earlier Agreements with the hope of quelling persistent debates over this issue. As discussed later, effective enforcement of the terms of the Agreement has improved as well. Although the terms of the Agreement have been altered during its twenty-five year history, the underlying motivation continues to be the stabilization of coffee prices via a system of quotas applied to producing country exports. While references to the ICA in this paper pertain to the

1983 Agreement specifically, they generally apply to the entire history of the international coffee cartel.

III. OVERVIEW OF THE INTERNATIONAL COFFEE AGREEMENT

The text of the 1983 International Coffee Agreement begins by stating the objectives of the Agreement. The primary objectives include assuring "fair prices to consumers" and "remunerative prices to producers," and avoiding excessive fluctuations in world supply. The political motivations of consuming countries which led to the establishment of the ICA are evident, as well, in the objectives calling for promoting employment and bringing about better living conditions in coffee producing countries and increasing their purchasing power.[3] Although it is not formally stated in the text of the Agreement, these objectives indirectly imply stabilizing prices at an artificially high level, thereby establishing a form of subsidization of coffee producing countries by coffee consuming countries.

The next several chapters of the Agreement deal primarily with administrative matters, many of which are not relevant to this paper. However, a brief discussion of the organizations governing the terms of the Agreement is appropriate. The coffee producing and consuming nations which are parties to the Agreement are automatically included as members of the International Coffee Organization

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[3]International Coffee Agreement, 1983, ch.I, art. 1.

(ICO). The ICO is responsible for the administration and supervision of the terms of the ICA. It operates through the International Coffee Council, the Executive Board, and the Executive Director. Producing countries responsible for nearly all of the coffee produced in the world, and consuming countries responsible for approximately ninety percent of world coffee imports are currently parties to the Agreement.

The International Coffee Council is the highest authority of the ICO. It consists of one representative from each member country and is responsible for adopting the rules necessary for carrying out the terms of the Agreement. Each year the Council elects a sixteen member Executive Board to which it can delegate a large portion of its responsibilities. The Council also elects an Executive Director who is the chief administrative officer of the ICO. For the purpose of voting, 1000 votes are allocated to producing members and 1000 to consuming members each as a group. Within these groups, votes are distributed to each member based essentially on the share of coffee exports or imports for which it is responsible. For most major issues, such as amendments to the Agreement or alteration of the quota allocation, a distributed two-thirds majority is required to approve the proposal. This means that at least two-thirds of the producing member votes and two-thirds of the consuming member votes must be cast in favor of the

proposal. Through this hierarchy all administrative functions of the ICO are accounted for - from the daily collection of coffee trade statistics to revisions of the text of the ICA. The ICO and the coffee market in general operate on a coffee year which runs from October first to September thirty-first.

The sections of the Agreement most pertinent to this paper are included in chapters seven and nine of the ICA. Chapter VII is devoted to the regulation of exports and imports. It establishes the guidelines for the system of quotas and specifies the bulk of the coffee cartel structure discussed below. The system of quotas is the crux of the ICA and is an essential tool used by the ICO to control supply and price. The goal of stabilizing prices at an artifically high level is directly implied by the provisions of Chapter VII. Chapter IX of the Agrement specifies a process for officially resolving disputes between parties to the ICA and also has played an important role in the success of the coffee cartel.

IV. THE STRUCTURE OF THE INTERNATIONAL COFFEE CARTEL

Traditonal economic theory of cartelization suggests that cartels are inherently unstable, especially in a market composed of many unrelated producers and consumers like the international coffee market. Assuming the cartel is effective in establishing a price above the free market level, then each member of the cartel has an incentive to cheat. The primary incentive to cheat is provided by the fact that the price, or marginal revenue, received by producers exceeds marginal cost. Therefore, producers can lower their price and still accrue economic profits. Cheating normally involves one or more producers increasing their market share at the expense of other cartel members by trading at a price slightly below the cartel price. Such behavior is facilitated by a market characterized by many disperse producers and consumers because this reduces the possibility that a cheater will be detected. The theory states that eventually either one producer will cheat too much or several producers will cheat at once, and the remaining members of the cartel will recognize that the cartel arrangement has been violated. This leads to retaliation by the producers in compliance with the cartel, and eventually the cartel collapses to the free market case.

The ICA has now operated for nearly twenty-five years -

a direct contradiction of this theory. An analysis of the terms of the ICA presents several explanations of the ability of the international coffee cartel to overcome the perils presented in economic theories of cartelization.

The initial step in implementing the international coffee cartel is outlined in Article 38 of the Agreement. This article calls on the Council of the ICO to "establish a system of indicator prices which shall provide for a daily composite indicator price."[4] The ICO currently calculates four indicator prices, each designed to represent a distinct type or quality of bean, as well as a composite indicator price. These indicator prices are presented in Table 1. The composite indicator price includes market prices for coffee beans categorized as Other Milds and Robusta. Prices for Colombian Milds and unwashed Arabica coffee are excluded because these prices are not considered accurate indicators of the market.[5] Once the composite indicator price is established, the Council constructs a range in which this price is to be maintained. The Agreement specifies several factors which are to be considered when determining the appropriate price range. These include trends in production and consumption, the current level of stocks in producing and consuming countries, changes in the world monetary

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[4]International Coffee Agreement, 1983, ch. VII, art. 38.

[5]Marshall, The World Coffee Trade, pp. 118-119.

TABLE I

THE INTERNATIONAL COFFEE ORGANIZATION COFFEE INDICATOR PRICES

Indicator Price	Source of Beans Included
Colombian Milds	Colombia, Kenya, Tanzania: considered the best quality producers
Other Milds	Central American and other predominantly washed Arabica producers
Unwashed Arabica	Brazil, Ethiopa: producers mainly unwashed Arabica
Robusta	producers mainly of Robusta

SOURCE: C.F. Marshall, The World Coffee Trade: A Guide to the Production, Trading, and Consumption of Coffee (Cambridge: Woodhead-Faulkner, 1983):117.

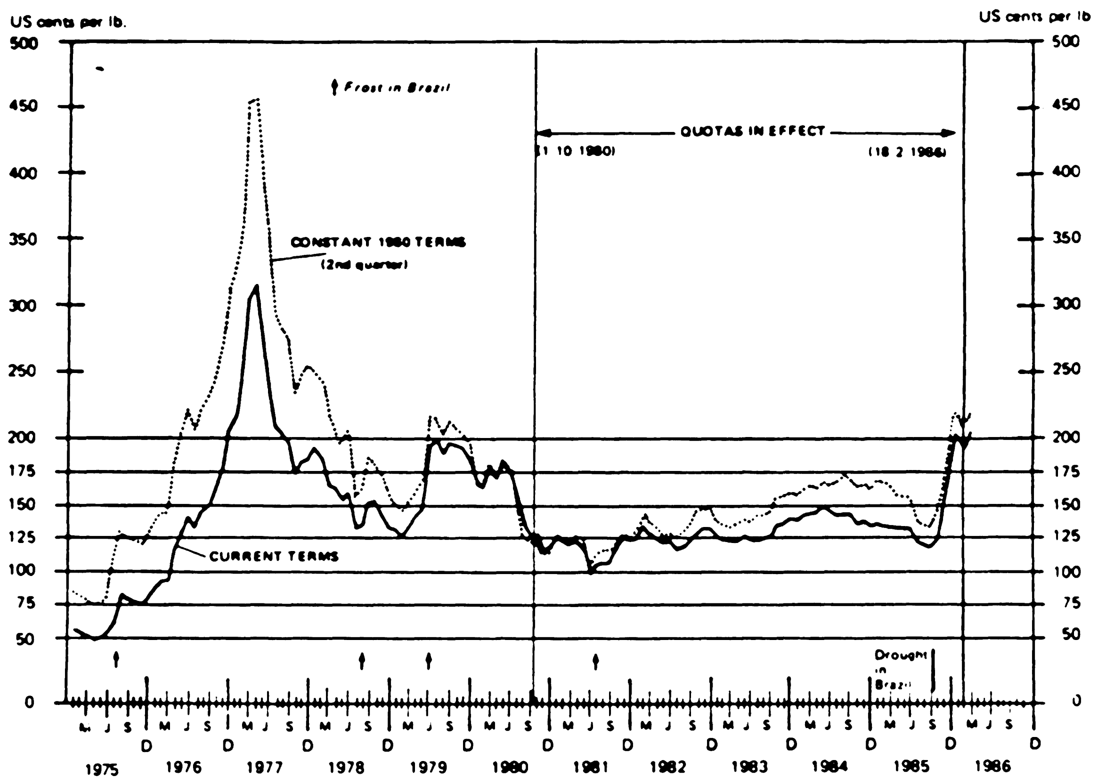
system, and trends in worldwide inflation and deflation. Obviously, the way in which the Council might incorporate these factors as guidelines for determining the appropriate price range for green coffee is ambiguous. The more important characteristic of this article is that it authorizes a crucial part of a cartel, a price-fixing mechanism, and that consuming countries have agreed to this provision.

Once the desired price level has been determined, parties to the cartel must then create some market distortion to achieve this price. Much of Chapter VII of the Agreement describes the system of quotas designed to maintain the composite indicator price in the range arrived at through the provisions of Article 38. The quota restrictions apply to exporting member country shipments to importing member countries only. Exporting members are allowed to sell coffee to non-member countries. However, this portion of the market is small and has had a negligible direct impact on the cartel. The non-member countries did have an indirect impact on the cartel during its early years through their role in the "tourist coffee" trade discussed later. The Council of the ICO is required to set the global quota level for the following coffee year during the last regular meeting of the current coffee year. Article 34 provides quidelines for setting the quota at a level which will stabilize prices in the range discussed above. Again

the Council is instructed to consider several factors including estimated consumption, the level of coffee inventories in importing member countries, and possible production shortfalls, but it is left with no clear decision on the best quota level for achieving price stability in the desired range.

The uncertainty associated with determining a global quota that will stabilize prices at the desired level is cleverly accounted for in the Agreement. An adjustment to the quota level is triggered automatically when the indicator price fluctuates beyond the upper or lower bound of the price range. If a fifteen-day moving average of the composite indicator price reaches the upper (lower) bound of the price range, the quota level is automatically increased (decreased) by an amount predetermined by the Council. The Council usually establishes several price tiers at the upper and lower bounds of the price range each of which trigger a further adjustment of the quota when surpassed by the indicator price. The automatic adjustment of the quota level prevents the need for controversial, political discussions to determine the best corrective action each time prices stray from the desired level, and it has saved the coffee cartel from many internal problems.

The quota system has been very successful in stabilizing prices at the desired level throughout much of the history of the Agreement. Figure 1 illustrates movement



NOTE: (1) Prices refer to average of Other Milds and Robustas up to September 1976, Composite Indicator Prices 1976 up to September 1981 and Composite Indicator Price 1979 thereafter.

(2) Prices in constant terms refer to prices in current terms deflated by the U.N. index of unit values of exports of manufactured goods from developed market economies. (Base: April—June 1980 = 100).

SOURCE: International Coffee Organization, "Exports/ Supply," <u>Statistics on Coffee</u>, April 28, 1986.

FIGURE I

COMPOSITE INDICATOR PRICES: MONTHLY AVERAGES 1975-1986

of the composite indicator price from 1975 through April 1986. During the period from September 1980 to November 1985, just before the Brazilian drought resulted in the suspension of quotas, the composite indicator price was successfully stabilized in the $1.20 to $1.50 range. However, at times, supply shocks such as a frost in Brazil in 1973 or the Brazilian drought in 1985, have caused extreme price fluctuations which expansion of the quota failed to control. Following these shocks, a sharp decline in the expected yield from the current Brazilian crop, as well as uncertainty over the extent of the damage and its impact on future crops, have resulted in substantially higher prices. Since prices greatly exceeded the upper bound of the price range, and the supply shock overwhelmed efforts at price stabilization during these periods, the continued imposition of quotas would have served no purpose. Rather, it might have resulted in the collapse of the cartel because significantly higher prices would have magnified producing country incentives to abandon the Agreement entirely. The Agreement preempts such behavior by automatically suspending the quota system if prices persist above the highest price automatically triggering an adjustment to the quota. The quota system is then reimplemented if prices reach the midpoint of the price range increased by 3.5 percent. These provisions stabilize the cartel by allowing its structure to remain intact when

conditions, such as weather, over which producing countries have no control lead to tightened supplies which force prices up and eliminate the need for price supporting quotas. The quota system was suspended most recently in February of 1986 following the drought in Brazil in 1985, and, prior to that, in 1973 following a Brazilian freeze.

A specific method for allocation of the global quota is outlined in Articles 31 and 35 of the Agreement. A small portion of the total quota is allocated to a group of minor producing member countries and distributed among them according to set percentages or amounts specified in Annex 2 of the ICA. In the terminology of the Agreement, these countries are exempt from a basic quota. The remaining producing members are classified as countries entitled to a basic quota. The small amount of coffee allocated to countries exempt from a basic quota is deducted from the global quota, and the remainder, referred to as the basic quota, is allocated to countries entitled to a basic quota. The basic quota is divided into two categories. A fixed part, which can account for no less than seventy percent of the basic quota, is distributed to the members entitled to a basic quota according to the percentages stated in Annex 3 of the ICA. The second category, the variable quota, is determined by the Council subject to the constraint that the fixed quota be no less than seventy percent of the basic quota. A two-thirds distributed majority vote of the

Council is required to alter the fixed and variable quota amounts from seventy and thirty percent of the basic quota respectively. The variable part is distributed according to each member's level of verified stocks relative to the total verified stocks of all producing members entitled to a basic quota. Table II lists the exporting members of the ICO and their share of exporting member coffee exports for the 1978/1979 coffee year, when quotas were suspended, and the 1984/1985 coffee year, when quotas were in effect. It is followed by Table III which shows the share of the initial and final annual quota allocated to certain countries entitled to a basic quota for the coffee years 1980/1981 through 1984/1985. The final annual quota reflects any quota adjustments made during the year.

As mentioned earlier, the means of allocating the global quota was revised in the 1976 Agreement with the hopes of ending debates over market share. Despite this more formal system, the debate over quota allocation and market share has remained fierce. It has posed the most serious threat to the existence of the coffee cartel. Following the suspension of quotas in 1973, debate over how quotas should be distributed, and whether or not Brazil's share should be reduced because of its relatively greater susceptibility to damaging weather in major coffee growing regions, prevented the reintroduction of the quota system until prices for green beans persisted near seventy cents

TABLE II

EXPORTING MEMBERS AND THEIR SHARE OF EXPORTING MEMBER COFFEE EXPORTS
(Percentages - rounded)

Member	1978/79 (Quotas Suspended)	1985/85 (Quotas in effect)
Colombian Milds	21.4	17.4
Colombia	18.2	14.0
Kenya	1.9	2.3
Tanzania	1.2	1.1
Other Milds	26.8	25.4
Costa Rica	2.4	3.0
Dominican Republic	0.7	0.8
Ecuador	2.1	2.1
El Salvador	5.2	3.6
Guatemala	4.0	4.5
Honduras	1.6	1.9
India	1.7	1.9
Mexico	4.7	4.3
Nicaragua	1.4	1.0
Papua New Guinea	1.2	1.0
Peru	1.7	1.4
Brazilian and Other Arabicas	26.3	31.7
Bolivia	0.2	0.2
Brazil	21.6	26.6
Burundi	0.7	0.8
Cuba	0.2	0.3
Ethiopia	2.3	1.7
Haiti	0.4	0.5
Jamaica	0.02	0.02
Malawi	0.006	0.06
Panama	0.06	0.1
Paraguay	0.06	0.3
Rwanda	0.5	0.8
Venezuela	0.3	0.2
Zambia	---	0.009
Zimbabwe	0.1	0.3
Robustas	25.4	25.5
Angola	1.6	0.5
Benin	0.003	0.08
Cameroon	2.4	2.2
Central African Republic	0.2	0.4

TABLE II - Continued

Member	1978/79 (Quotas Suspended)	1984/85 (Quotas in Effect)
Congo	0.2	0.06
Cote d' Ivoire	7.1	6.2
Equatorial Guinea	0.01	0.02
Gabon	0.006	0.05
Ghana	0.02	0.009
Guinea	0.02	0
Indonesia	6.0	7.3
Liberia	0.2	0.2
Madagascar	1.3	1.1
Nigeria	0.08	0.02
Sierra Leone	0.3	0.2
Sri Lanka	---	0.1
Thailand	0.04	0.5
Togo	0.2	0.4
Trinidad and Tobago	0.04	0.02
Philippines	0.4	0.7
Uganda	3.6	3.6
Zaire	1.6	1.7

SOURCE: International Coffee Organization, "Exports," Statistics on Coffee, April 28, 1986.

TABLE III

SHARE OF INITIAL AND FINAL QUOTAS ALLOCATED TO SELECTED EXPORTING MEMBERS
(Percentages - rounded)

Member	1980/81		1981/82		1982/83		1983/84	
	Initial	Final	Initial	Final	Initial	Final	Initial	Final
Angola	0.7	0.7	0.8	0.9	0.9	0.6	0.8	0.5
Brazil	24.9	25.6	27.0	27.8	28.5	28.5	28.5	28.7
Cameroon	2.8	2.7	2.6	2.6	2.5	2.5	2.5	2.7
Colombia	16.7	16.2	15.1	14.5	15.1	15.3	15.1	15.2
Costa Rica	2.6	2.5	2.3	2.2	2.0	2.0	2.0	2.0
Cote d' Ivoire	6.0	5.9	7.3	7.5	7.2	6.9	7.2	7.0
Dominican Repub.	0.8	0.8	1.0	1.0	0.9	0.9	0.9	0.9
Ecuador	2.2	2.2	2.0	1.9	2.0	2.0	2.0	2.0
El Salvador	4.0	3.8	4.1	3.9	4.1	4.2	4.1	4.2
Ethiopia	2.4	2.2	2.3	2.2	2.4	2.4	2.4	2.4
Guatemala	3.6	3.5	3.3	3.2	3.2	3.2	3.2	3.2
Honduras	1.9	1.8	1.7	1.6	1.4	1.4	1.4	1.4
India	1.9	1.9	1.7	1.7	1.1	1.1	1.1	1.2
Indonesia	5.3	5.3	4.0	3.9	4.2	4.3	4.2	4.2
Kenya	2.2	2.2	2.4	2.3	2.3	2.3	2.3	2.3
Madagascar	1.7	1.6	1.4	1.4	1.4	1.4	1.4	1.5
Mexico	3.8	3.7	3.3	3.3	3.4	3.4	3.4	3.4
Nicaragua	1.4	1.3	1.2	1.2	1.2	1.2	1.2	1.2
Papua New Guinea	1.2	1.2	1.1	1.0	1.1	1.1	1.1	1.1
Peru	1.5	1.5	1.4	1.3	1.2	1.2	1.2	1.2
Philippines	0.5	0.5	0.7	0.7	0.8	0.8	0.8	0.8
Tanzania	1.4	1.3	1.4	1.4	1.3	1.3	1.3	1.3
Togo	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Uganda	3.4	3.7	4.5	5.0	4.1	4.0	4.1	4.2
Zaire	2.1	2.0	2.1	2.0	2.0	2.0	2.0	2.0

SOURCE: International Coffee Organization, "Initial and Final Annual and Quarterly Export Quotas," <u>Statistics on Coffee</u>, June 16, 1986.

per pound. At this time producing countries began to feel the impact of prices well under the level that would be maintained by the quota system and began to compromise.[6] Quotas were finally placed in effect in the fourth quarter of 1980. Many aspects of the same debate have resurfaced in current negotiations to reinstate the quota system following their suspension in 1986. Up to this point, however, the ICA has survived the complex political bickering over market share, and the coffee cartel remains in operation.

The mechanisms discussed above - a method for price-fixing, and the distribution of quotas - compose the foundation of the coffee cartel. However, these mechanisms alone do little to discourage producing countries from cheating by selling more than their allocated quota at a level slightly below the cartel price. Therefore, the Agreement specifies several measures to facilitate the enforcement of the quota system. Many of them are feasible in the coffee cartel only because of its somewhat unique characteristic including all of the major consuming nations as active participants in the Agreement, supporting the existence of an international coffee cartel. Table IV lists the importing members of the ICO and their respective share of coffee imports by all importing members. These countries play an integral role in determining the indicator price

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[6]Todd E. Petzel, phone interview, April 1987.

TABLE IV

IMPORTING MEMBERS AND THEIR SHARE OF IMPORTING MEMBER COFFEE IMPORTS
(Percentages - rounded)

Member	Share (1984/85 Coffee Year)
Australia	1.0
Austria	1.8
Belgium/Luxembourg	2.8
Canada	2.9
Cyprus	0.04
Denmark	1.5
F.R. of Germany	14.2
Fiji	0.001
Finland	1.3
France	8.2
Greece	0.6
Ireland	0.2
Italy	7.0
Japan	6.8
Netherlands	4.1
New Zealand	0.2
Norway	1.1
Portugal	0.5
Singapore	1.7
Spain	3.2
Sweden	2.4
Switzerland	1.7
United Kingdom	3.9
United States	31.5
Yugoslavia	1.1

SOURCE: International Coffee Organization, "Imports," Statistics on Coffee, November 25, 1986.

range, quota levels, and a wide range of other coffee market issues through their positions as voting members of the ICO commanding one-half of the votes on the Council. The Agreement specifically calls on importing members to help insure that producing members comply with the cartel.

Articles 43 and 44 specify a system of stamps and certificates which are used to monitor shipments of coffee from exporting member countries to importing members. Each shipment must be accompanied by a Certificate of Origin from the exporting member as well as quota stamps to cover the number of bags in the shipment. The Council divides each country's annual quota into four roughly equal quarterly quotas. Each quarter exporting member countries are issued quota stamps equal to the number of bags of coffee composing their quarterly quota. The exporting members are responsible for establishing an agency, subject to ICO approval, to oversee all coffee exports and ascertain that the papers accompanying each shipment are complete. The importing member countries must establish a similar agency to monitor all coffee imports and insure that each bag is covered by a Certificate of Origin and accompanied by the correct number of quota stamps. They are instructed to reject any coffee not accompanied by a quota stamp. This direct oversight by importing members has effectively deterred producing countries from cheating on their quota restrictions.

Consuming member countries have further strengthened the cartel by agreeing to limit imports from non-member countries. Article 45 restricts consuming member country imports from non-member countries to no more than the average annual level of imports from that country during some time period, specified by the Council, when quotas were not in effect. By effectively closing the market, limiting supply, and curbing the ability of consumers to weaken the cartel by buying from other sources, this article enhances the ability of the quota system to stabilize prices in the desired range.

Evidence suggests that in the earlier stages of the Agreement this area did present a problem. It was during this period that the phrase "tourist coffee" was coined. Tourist coffee refers to coffee from a producing member which is sold to a non-member country and is either never delivered to that country or goes through the non-member country and eventually finds its way into an importing member country. The tourist coffee network benefits producing members by allowing them to sell more coffee, and it allows consuming members to buy coffee at a price below the cartel price. Initially, tourist coffee was largely the result of a promotion designed to develop potential "new markets." The earlier Agreements allowed for heavy price discounts on coffee sold to certain consuming countries believed to have potential as coffee importers. Imports by

these countries did increase, but the heavily discounted coffee was frequently the source of tourist coffee. As the extent of this problem became more evident, the 1976 Agreement eliminated these discounts. In more recent years, tourist coffee took a different form. Exports to non-member countries were routed through a free port and often did not arrive in the non-member country. Instead, this coffee was held in the free port and either found its way into a member country while quotas were in effect or was readily available for shipment to any country in the event that quotas were suspended. The ICO Council has adopted a resolution which has at least partially solved this problem. It requires that member country exports to non-members be checked into the non-member country by an ICO approved agent within a reasonable period of time. Although tourist coffee continues to be a sensitive issue, especially when quotas are in effect, more emphasis has been placed on overcoming this problem in recent years, and statistics collected by the ICO indicate that the incidence of tourist coffee is declining. For example, the percent of importing member country imports originating in exporting member countries increased from approximately eighty-six percent in 1980 to ninety-four percent in 1985.[7]

In addition to monitoring agencies in the exporting and

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[7]International Coffee Organization, "Exports/Supply," Statistics on Coffee, April 23, 1986.

importing member countries, the ICO Executive Board acts as an investigative apparatus. The Board is charged with monitoring all aspects of the Agreement and investigating any possible breaches. It oversees the export and import agencies responsible for monitoring the system of quota stamps in each member country, and has the power to determine that any one of these agencies is not performing satisfactorily and have it replaced. The Board also collects extensive information on all aspects of the market by conducting individual investigations and analyzing daily transaction data maintained by the ICO. If the Board finds evidence of cheating it may take action on its own in some cases, or bring the issue before the entire Council which would then determine the necessary actions.

The ability of the ICA to prevent cheating is also aided by a formal procedure for arbitrating disputes between parties to the Agreement. Chapter IX of the Agreement is devoted entirely to this topic. It calls first for diplomatic discussion of the dispute by the parties involved. Should such discussion fail to solve the problem, the matter is referred to the Council. The Council appoints an advisory panel which is chosen based on individuals' expertise in the area being disputed. The advisory panel then investigates the issue and presents all findings to the Council which decides the dispute based on this evidence. Thus, the Agreement provides an official system for quickly

resolving all disputes which might, if left unresolved, disrupt the cartel structure and eventually lead to its collapse.

Countries found in violation of the Agreement by an export or import agency, by the Executive Board, or through the arbitration of a dispute can be penalized in one of several ways. Producing countries which exceed their quarterly quota or attempt to maintain their market share by failing to report shortfalls from their quota allocation are subject to a reduction in future quota allocations, loss of voting privileges on the Council, and possible expulsion from the ICO. Similarly, importing member countries may have their voting rights restricted or face expulsion for excessive imports from non-member countries or for accepting coffee not covered by a quota stamp from a member country. Other violations for which a specific penalty is not provided in the Agreement are left to the Council. The Council determines both the nature of the breach and the appropriate penalty. A two-thirds distributed majority vote is necessary to impose any penalties.

To this point, member countries appear to be abiding by the terms of the cartel. The formal penalties outlined in the Agreement have never been invoked by the Council. The system of quota stamps monitored by producing and consuming countries is working well and overshipments have not been a major issue. Cases in which overshipments have occurred

have been minor. Deduction of an amount equal to the overshipment from the next quarterly quota of the country at fault, without imposing any formal penalty, has been the extent of corrective action. Shortfalls have been an issue at times, but they are more difficult to penalize. Producers argue that they cannot be blamed if buyers do not purchase coffee in amounts equal to their quota allocation. However, more pressure is being placed on producers to force them to lower prices and prevent them from using shortfalls to boost coffee prices.

The above discussion highlights several mechanisms which have countered naturally existing incentives to cheat on the coffee cartel. The ICA has established a soundly regulated cartel. It provides a formal method for determining the level at which prices should be fixed and for stabilizing prices at this level through a system of quotas. The ability of producing countries to circumvent the cartel is restricted by monitoring agencies in both exporting and importing member countries. These agencies are closely watched by the ICO Executive Board which investigates all suspected breaches of the Agreement. Should an alleged violation of the Agreemement or a dispute between two or more members arise, the ICO is equipped to quickly reach a verdict. Provisions are then in place for adequately punishing any member not fulfilling its obligations under the terms of the Agreement. The

simultaneous interaction of these mechanisms has resulted in an international coffee cartel successful in stabilizing prices at a level above that which would exist under free market conditions. However, there is nothing in the Agreement which impels any country to remain a member of the ICO and support the coffee cartel. The puzzle presented by continued participation in the ICO by countries, especially consuming countries, which apparently could benefit from the collapse of the coffee cartel is the focus of the next section.

V. PARTICIPATION BY CONSUMING AND PRODUCING COUNTRIES

The previous section discussed many explanations for the successful cartelization of the international coffee market through the ICA. The longevity of the cartel is less surprising when viewed in the context of an agreement officially sanctioned by the governments of major consuming countries as well as producing countries. This has allowed for the implementation of several important cartel mechanisms not feasible in other cartelization efforts. However, the tight structure of the Agreement fails to answer several other prominent questions surrounding the international coffee cartel. It is not clear why consuming countries continue to support the Agreement despite the resulting higher coffee prices. Exactly how much and which countries benefit as a result of the ICA is also uncertain. Analysis of the issue of who the cartel hurts and who it benefits may provide further insight to its relatively long-lived success.

In answering the question of why all of the major coffee consuming nations have remained parties to the ICA, the foremost response is politics. In discussing this question only the United States, the world's leading coffee importer, is discussed here. However, the explanations for United States government participation are insightful and can be applied to other major consuming countries, taking

into account differences in their form of government and their political interests.

The Agreement is a means for providing an indirect subsidy to many Latin American allies at the expense of coffee consumers. Many of the Latin American countries that benefit from the artificially high prices established by the ICA quotas face persistent economic problems. They rely heavily on income from coffee exports to combat these problems. By participating in the Agreement the United States provides economic support which in turn encourages political stability. The benefits to the United States from maintaining politically stable allies in Latin America are beyond the scope of this paper, but they are assumed to be substantial from the perspective of national defense.

Several works analyzing the political motivation of government trade intervention have been written. Conclusions presented by Caves[8] and Helleiner[9] in their studies of Canada's tariff structure can be applied to consuming country participation in the ICA. Godek[10]

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[8]Richard E. Caves, "Economic Models of Political Choice: Canada's Tariff Structure," Canadian Journal of Economics (May 1976):279-299

[9]G.K. Helleiner, "The Political Economy of Canada's Tariff Structure: An Alternative Model," Canadian Journal of Economics (May 1977):318-326.

[10]Paul E. Godek, "Industry Structure and Redistribution Through Trade Restrictions," Journal of Law and Economics (October 1985):687-703.

discusses the idea of a political indifference function which is also relevant.

The political feasibility of a government sponsored, indirect subsidy depends largely on who bears the cost of the subsidy. In the case of coffee, most of the cost is passed on to consumers at the retail level. This fact makes participation in the ICA by the United States far more simple. Since the flow of information to consumers about the effects of the Agreement on retail coffee prices is weak, the ability of consumers to organize as an interest group opposing the ICA is severely hindered. Most coffee drinkers are probably unaware that an Agreement regulating the trade of coffee exists. Therefore, political repercussions felt by elected government representative voting in favor of continued United States participation in the Agreement are likely to be insignificant, at least from retail consumers. The ability of United States coffee roasters to organize and apply political pressure is much greater, especially since the majority of them are already members of the National Coffee Association. It would seem logical that this group would lobby against United States participation in the ICA because it restricts the free trade of coffee. However, for obscure reasons, some of which are presented below, the dominant stance of domestic coffee roasters is in favor of the ICA. Thus, United States government support of the Agreement is very logical. The

Agreement has the desired result of subsidizing many Latin American allies. It is also attractive to politicians because it is endorsed by the major organized group affected by the ICA and because the cost is born by disperse consumers most of whom are completely unaware of the subsidy process. The conditions discussed above offer an explanation for the United States government support of participation in the ICA.

While these political motivations are more readily apparent, support of the Agreement by domestic roasters remains a conundrum. The primary justification offered by United States coffee roasters for their support of the ICA is stability. They argue that the Agreement results in desirable price and supply stability. Under the quota system they know exactly how much coffee each country can export, and information on the availability of the types of beans they use in their specific blends is relatively certain. The ICO provides a continuous flow of statistics on the current situation of the coffee market worldwide. In brief, they feel that the ICA has effectively reduced their risk. However, their preference for price and supply stability as created by the ICA seems illogical. The quota system has restricted free trade, established an artificially high price level, and offered consumers no protection from weather related supply and price instability. At the same time, financial tools for risk

management, such as a futures market, already exist.

The exposition of coffee roasters' support of the ICA is a perplexing problem. Several insights to the roasters' behavior are discussed below, but they, at best, offer an incomplete explanation. In the end, this puzzle is not fully resolved.

A paper by Hueth and Schmitz[11] analyzing price instability in internationally traded goods has some potentially useful applications. They conclude that both consumers and producers can benefit from price stability when the benefit is measured by the expected change in producer and consumer surplus. However, appropriate compensation must occur to obtain this result. They show that without compensation individual consuming countries may gain or lose depending on the source of the instability. Extending their analysis to include benefits from decreased risk resulting from price stability could lead to conditions under which domestic coffee roasters would gain from price stability. Roasters currently perceive extensive risk in the absence of the ICA. They contend that price fluctuations would be magnified and information about supplies of the beans they prefer for their blends would be

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[11]Darrell Hueth and Andrew Schmitz, "International Trade in Intermediate and Final Goods: Some Welfare Implications of Destabilized Prices," The Quarterly Journal of Economics (August 1972):351-365.

scarce. These conditions would require that they increase their stocks and pay greater storage costs. In light of these perceptions it is possible that their expected consumer surplus could be higher under the terms of the Agreement than in a free market.

This argument assumes that the ICA system of quotas is a more effective risk management tool than those currently available in the market. This is not likely, but it may be the case from the standpoint of domestic roasters. According to Todd Petzel, Chief Economist for the Coffee, Sugar and Cocoa Exchange, Incorporated, the major roasters are not adroit in using the risk management tools available in the coffee market.[12] It appears that roasters have become complacent during the twenty-five year history of the ICA. They may have come to rely on the Agreement as their primary risk management mechanism. This implies that their skills in utilizing financial tools to manage risk have deteriorated, leaving them in their present state - intimidated by the uncertainty associated with life without the ICA. The fact that the major coffee roasting companies in the United States, such as Procter and Gamble, produce a wide range of products could also suggest that their interests lie in areas other than improving their competence with coffee market risk management tools. While these

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[12]Petzel, phone interview, April 1987.

factors provide some useful insights to the roasters' position, they fail to support a theory justifying their approval of the ICA.

The participation in the Agreement by smaller consuming countries is also puzzling. In some cases these countries are very selective coffee consumers purchasing only higher quality coffee. Since the coffee trade tends to be dominated by members of the ICO and sales of high quality coffee outside the ICO are not at all appreciated by consuming members, these smaller countries would probably have to pay a premium to purchase high quality coffee if they were not parties to the Agreement. These countries would benefit most from free market conditions, but since they are small and could not hope to cause the collapse of the Agreement alone by refusing to participate, they do face potential gains from supporting the Agreement. The extent of these gains, however, is not clear, and this argument fails to explain participation in the ICO by several other less selective consuming countries. There is evidence that some of the smaller consuming countries are actually realizing no benefit from membership in the ICO. Israel and Hungary both recently withdrew themselves from the ICO.

Complete understanding of consuming country participation in the ICO is a difficult feat. Political interests were at the heart of consuming country efforts to establish the first International Coffee Agreement in the

1960's and they still offer the clearest explanation for governmental support by some major consuming countries such as the United States. Several factors such as market uncertainty and risk reduction are offered as justification for support by domestic roasters. Participation in the ICO also offers potential benefits to several smaller consuming countries. The story, however, is incomplete. These reasons alone provide an unsatisfactory explanation of the long term support by consumers who would pay lower prices in the absence of the ICA.

Producing country benefits from the ICA are primarily in the form of higher coffee prices. During the first five years of 1980, the quota system maintained prices for exports to consuming member countries between $1.20 and $1.50 per pound while exports to non-members were priced near $.75 per pound.[13] While the price paid by non-members would probably increase if all trading took place in a free market, the free market price would obviously be below the cartel price. The cartel establishes an inflated price for sales to approximately ninety percent of the export market. However, several producing countries also face increased costs. Prior to the Agreement stocks held by most smaller producing countries were small. Since the Agreement, these countries have been faced with increased storage costs

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[13]"Commodity Agreement Has Met Objectives; Prices Have Stabilized," World Coffee and Tea, December 1984, p. 18.

because production frequently exceeds their quota allocation. This facet of the Agreement has shifted much of the burden of storage from consuming countries to producing countries.[14] Although the Agreement has increased the price producers receive, this is partially offset by higher costs.

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[14]"Commodity Agreement Has Met Objectives; Prices Have Stabilized," World Coffee and Tea, December 1984, p. 18.

V. SUMMARY AND CONCLUSIONS

The first International Coffee Agreement came into force in 1963 due the negotiation efforts of several major consuming countries motivated by political interests. The primary objective of these consuming countries was to establish a means for subsidizing economically and politically unstable coffee producing countries. The Agreement has succeeded and the fourth version is now in effect. The main mechanism of the Agreement, a system of quotas applied to exports by producing countries, has effectively established an international coffee cartel which has maintained coffee prices at an artificially high level throughout much of its history. The fact that the cartel has avoided self-destruction for this amount of time contradicts economic theories of cartelization.

The structure of the cartel outlined in the ICA is a central reason for its success. The ICA incorporates several important cartel mechanisms. These include a system for determining the cartel price and for achieving this price by imposing quota restrictions on all producing member countries to regulate supply. Producing member countries are now responsible for almost all of the worldwide production. The Agreement has also implemented a widespread organization for monitoring the quota system. The most important aspect of the monitoring organization is probably

the participation of consuming countries responsible for approximately ninety percent of all coffee imports. These countries willingly monitor the system of quotas and support the coffee cartel. A method for arbitrating disputes and punishing members in breach of the Agreement adds further incentives for members to comply with its provisions. The sound structure of the cartel and the ability to enforce the quota system explain the cartel's defiance of inherent instabilities. However, continued participation by major and minor consuming countries remains a puzzle. The political goals of several of these countries may justify government support of the ICA, but the position of companies actually importing coffee is a mystery. Analysis of their arguments provides unsatisfactory explanations for their behavior and fails to suggest a conclusive theory concurring with their support of the ICA.

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