The Cuban Sugar Industry in a Changing World

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A. Brief description of the sugar industry.

Overview, organization and management

The sugar industry consist of two distinct sectors, agricultural and industrial, which compliment each other in the production of sugar and its derivatives. From the time when the sugar mills were confiscated, and until 1980, all sugar operations were controlled by two ministries, Ministry of Sugar Industries (MINAZ) and MINAG (Ministry of Agriculture). All sugar and related operations are now under MINAZ control. The stated purpose for the merge was to better coordinate and utilize the sugarcane and sugar production resources. Additional activities include the operations of the distilleries, yeast, bagasse boards and dextran plants as well as marketing and commercialization efforts of all the industry products around the World with major offices in London and other cities.

The industry operates 7,700 Km. of railroad of which 90 percent are of standard gauge in addition to a fleet of trucks and port installations. All port installations and operations (terminal, etc.) related to sugar exports are under the control of the Ministry. Approximately 80.0 percent of the sugar is exported in bulk.[1]

MINAZ is headed by Minister, Juan Herrera, member of the Communist Party, the Council of State and the National Assembly of the People Power, with authority to operate and execute plans and programs devised by the Council and other bodies for the entire industry. The Ministry is comprised of 252 factories. Of those 156 mills produce sugar and 36 plants produce derivatives. Other entities are engaged in marketing, research and development, distribution of inputs (seeds, fertilizers and other chemical products), parts production and repairs. Four research institutes are sponsored and funded by MINAZ those are: ICIDCA investigates the sugar derivatives, INICA to pursue the development of new sugarcane varieties, ICINAZ to study and research into sugar and CUBA-9 which deals into cellulose and paper.[2]

All financial operations and execution of investments and budgetary obligations are under the authority of the Ministry and its corresponding counterparts within the financial authorities of the country. MINAZ budget allocations are included in the overall national budget. To discharge its obligations and undertake the administrative operations there are several regional and local offices located through the island. Those offices are in charge of implementing the plans and programs at the mill level in conjunction with the mill administrator and farm managers who are under the guidance and supervision of the local party apparatus and other mass organizations. Regional and local offices serve as reporting units and collect information daily on agricultural and sugar mill operations. Reports are provided through an electronic information network to different levels in the government. For example, the Ministry, the Party apparatus and the Council of State offices including President Castro office. The mill and farm administrator with title of director report directly to their respective vice-ministry in charge of their area office.

Sugarcane agriculture

The agricultural segment of the industry is composed of state and private farms. Since 1981 the sector is under the control of MINAZ. In 1988, the area dedicated to the cultivation of sugar cane was 1.758 million hectares or 59.5 percent of the total of area dedicated to agriculture 2.96 million hectares. On a yearly basis the country is planting 335,500 Ha. to rotate the area under cultivation. That implies that every five years the entire area is replanted. Sugarcane fields last only five or six years now. This could be the result of field mechanization, soil degradation and improper variety or a combination of all three problems. Sixty two percent of the land was harvested in 1989. The private sector planted 48.5 thousands hectares. In 1990, 87% of the area harvested consisted of green cane while 13% was burned.

Sugar industry

The industrial segment consist of 156 mills through out the country with the majority of the plants located in ten provinces. Over 50.0 percent or 77 mills are found in La Habana, Matanzas, Villa Clara, Cienfuegos and another 32 mills in Sancti Spíritus, Ciego de Avila, and Camaguey provinces. In addition to the sugar milling capacity, there are sixteen refineries most of them attached to the mills with a production in 1988 of 614.4 thousands metric tons of white sugar, 13 distilleries with a capacity of 7,190 Hltrs. per day, ten torula yeast factories, eighty animal feed plants, twelve paper and bagasse board plants and 4 furfural and dextran plants. In 1988 the sugar milling capacity exceeded 600,000 tons per day.

As a result of the 1970 ten million tons sugar campaign fiasco and to meet CMEA compromise, the country decided to invest and reorganize the industry. During the period from 1976-80, the leadership invested heavily in upgrading and modernizing the sugar infrastructure with the cooperation of the Soviet Union and CMEA. In fact no other sector of the economy received the ample benefits of the sugar industry. The percentage of total investments ranged from 13.7 in 1980 to 15.0 percent in 1988 and over twenty one mills were overhauled during the period. As a result output rose steadily and in 1980 production reached 7.9 million metric tons of sugar.

During the 1980's the investments in the sector continued with the modernization and expansion of the existing capacity. Seven new mills were built, none exceeding approximately 6,800 tons per day (600,000 arrobas per day) but the plans were to end the century with eight new additional mills. Several mills received the benefit of the plans.

B. Sugar impact on domestic economy.

In 1988, the last year reported, 36.4 percent of the Global Social Product (GSP) in 1981 prices was generated by the industrial sector. The agricultural sector contributed 13.59 percent of total GSP. Both sectors combined for 49.98 percent of total GSP. Therefore the magnitude of both sectors in the overall social product of the country does not have equal. Within the industrial activities, sugar ranked third overall only next to food, beverages and tobacco. Sugarcane within the total agricultural/livestock sector ranked second with 29.76 percent only after livestock. Thus, sugar has been loosing ground as an important economic activity of the country while other sector have been gaining such as food, commerce and services, etc. The data presented is limited and imprecise because of measurements difficulties.

Investment results

Considering the massive amounts of investments provided and conducted with Soviet assistance since the second half of the seventies, agricultural and industrial performance did not meet expected results. Agricultural yields never rose significantly reflecting the failure of mechanization, long term research to find optimum sugarcane varieties and better irrigations techniques. Industrial yields declined from 10.6 percent in 1989 to over 12.95 percent in the early fifties and most of the sixties as a result of poor inputs arriving at the mills. Cuba despite an increase in its grinding capacity from 500,000 tons per days during the 1970's to over 680,000 tons per day in 1989, was unable to decrease the effective number of grinding days to less than a hundred. Therefore, the poor quality of the raw materials and the difficulties in keeping the mills running for a consistent period of time are perhaps signaling the need for an industrial renewal. It can be concluded that investments in the sector have not paid off and the trade off made was at the expense of diversification.

Output

Further confirming disappointing investments results have been the lack of an overall increase in output. Since 1971, output never rose above 8.2 millon metric tons in 1984. For 1990-91 output was announced by the leadership as -disappointing- 7.6 million metric tons. The planned output for 1991, of 12.0 million tons will never be achieved under the present industrial and economic conditions abating the country.

Partial solutions to output difficulties

As a result of declining sugar production, the leadership needed to take corrective measures which could provided additional quantities of sugar in the short run and perhaps greater outputs in the future. By 1990, over 1.5 million tons sugar were secured from **Sucre et Denre** a trade broker, to meet previous outstanding commitments with CMEA and other costumers. To curtail future potential problems and avoid further difficulties, the leadership decided to expand the sugarcane area under cultivation with the expectations of future increases in sugar outputs. This partial solution did no take into account the difficulties with inputs, spare parts and transportation facing the industry. In addition, an acreage expansion further reduced the amount of pasture land, and the potential increases in other crops. Output would not increase as expected due to lower yields from marginal lands and other technical difficulties. The economic impact will be reflected by an increase in the food import bill and its consequent effects in the balance of payments.

Labor

Total MINAZ employment 438,600 in 1990 accounts for 12.2 percent of the country's labor force. However, agricultural employment in this vital and important sector of the economy has been unstable for years. In the 1970's agricultural employment in the sugarcane sector declined substantially due to the steady introduction of mechanization. In the 1980's the total number of employees in sugarcane agricultural activities were over 260,600 employees and by 1987 the number of employees declined to 224,900. By 1975 approximate 25.0 percent of the sector was mechanized, and now in 1990 over 73.0 percent of the agricultural shores are done by harvesters, plows, and cane lifters, etc. So far, the government intents to maintain the revolutionary promise of "less hand cutting." Nonetheless, the promise would be fulfilled for as long as the leadership feels that it is feasible, but as the amount of energy available is substantially reduced and acreage to harvest increase as planned, the shift in manpower might have been temporarily. It could be that by 1992 a considerable number of hand cutters will again begin to replace harvesters and other machines.

Sugar for energy exchange, provided a great bonanza to Cuba at the expense of the Soviet consumer. Among those benefits are the creation of a full time sugar industry which brought stability to the labor force. Since 1975, employment in the sugar industrial sector increased steadily. Its share of the entire industry remained at an average of 18.5 percent. In 1987, 138,700 employees were associated with the largest employment sector of the country. A factor affecting the employment have been the low productivity of some mills and the migration from rural to urban areas as claimed by Luzon, 1987. Thus a shortage of qualified workers affects the industry. Today there is an skilled labor market demand in the sugar industry sector.

C: Cuba's sugar markets and demand outlook

Sugar impact on the foreign sector

After the 1970 ten millions tons sugar fiasco, the leadership had not other alternative but to smooth the dislocations which occurred in the economy and to realize that sugar was the major export of the country.

Once again as the main industrial activity of the country--sugar would become King again--but with sensible parameters.

In order to turn around the damaged economy and to integrate the Revolution within the socialist camp the government decided to become member of CMEA (Council for Mutual Economic Assistance). To that effect, the Soviet Union sponsors Cuba and together with Mongolia and Albania form the group within the socialist commercial bloc known as the "lesser developed countries". Cuba's role in this group was "supplier of tropical agricultural commodities within the socialist division of labor". This integration into the socialist camp provided Cuba with a market for its export products including citrus fruits at subsidized prices. CMEA will guarantee a market for over five million metric tons of sugar. This almost guarantees a sugar campaign of 7.5 to 8.0 million metric tons.

The Soviet Union commitment to buy sugar provided the country the distinction of being its sole source supplier. The degree of sugar dependency was manifested when the Soviet Union coordinated an acreage reduction plan with Bulgaria, Czechoslovakia and the East Germany (GDR) within CMEA. However, Cuba can not be considered a reliable supplier. On several occasions, the National Bank Report (BNC) provided information on sugar purchases to the creditors group of the Paris Club. Sugar sales were reported from Dominican Republic and Columbia of different size tonnage. A contractual agreement signed with a brokerage house in Paris (Sucre et Denre) to borrowed substantial amounts of sugar to fulfill its Soviet agreement. The guarantor of the operation was the Soviet Union. Finally, during the past years the country was forced to postpone several sugar cargoes to different destinations. The postponement resulted in Japan having to purchase sugar in South Africa.

Demand for Cuba's sugar from countries outside the socialist bloc are a function of the supply and demand fluctuations of the commodities markets. The socialist commitment of CMEA and the Soviet Union represents well over seventy percent of the total production of the country. This output is exchanged at subsidized prices in transferable rubles. Those phony rubles provides Cuba the oil it consume. The table below shows the sugar distribution by country of destination including the amount sold at market prices in the world residual market. The tonnage sold as residual is above and beyond the amount needed for domestic consumption.

Table 1. Cuba: Sugar Exports-Selected Years

[In million metric tons raw value]

Year	U.S.A*	U.S.S.R	Eastern Europe	China	Other	Total Exports
1959	2.90	0.27	0.00	0.00	4.68	4.95
1960	1.95	1.58	0.23	0.48	3.34	5.63
1965		2.46	0.67	0.40	1.79	5.32
1970		3.11	0.96	0.53	2.31	6.91
1975		3.19	0.58	0.18	1.79	5.74
1980		2.73	0.69	0.51	2.26	6.19
1985		3.71	1.79	0.68	1.79	7.21
1986		4.02	1.51	0.31	1.51	6.70
1987		3.86	0.99	0.61	0.99	6.48
1988		3.31	1.22	1.40	1.22	6.97
1989		3.47	1.67	0.89	1.67	7.12
1990		3.57	0.59	0.89	2.09	7.14

Sources: International Sugar Organization, Yearbook, Various issues and Anuario Estadístico de Cuba, 1970-1989.

* Cuba's quota with the United States was suspended by the Eisenhower administration in 1961.

The sugar sector generates over 75.0 percent of the exports and most of the available convertible currency. No other activity of the economy remains as important as the sugar sector after thirty years. In relative terms, sugar buys all the oil which the nations need to generate the power consumed by all sectors of the economy. For example for the past several years, the Soviet Union provided Cuba with 13.0 million metric tons of petroleum and petroleum products. Only in 1990 the oil allocation changed substantially since reexport quantities were no longer available to Cuba. In 1991, the signed agreement between both countries--Cuba and USSR--calls for Cuba to provide 4.0 million metric tons and the USSR to deliver 10.0 million tons of petroleum and petroleum products.

Prices received from the sale of sugar varies but could be considered advantageous when compared to the World market price. The Soviet Union currently pay a preferential prices very similar to USA Contract 12. while in the past the price received was over 600.00 pesos per ton. Still many times over cost of production. The Eastern European countries paid also preferential prices but not as high as the Soviets. Almost any other revenues received by Cuba is in convertible currency as the country has not sold sugar in quantities greater than 2.3 million tons at world market prices.

Table 2. Cuba: Unit Value of Sugar Exports by Destination

[Values in pesos per ton. raw value]

Year	USSR	China	East Europe	Japan	World Price
1980					
1981	605.1	376.6	482.2	273.7	291.0
1982	625.3	334.5	498.9	132.4	153.3
1983	873.3	278.2	509.4	133.8	164.2
1984	867.9	287.9	479.0	83.0	102.8
1985	986.8	232.0	459.4	74.1	84.7
1986	866.8	162.3	480.5	121.9	107.5
1987	852.5	139.5	518.2	116.2	118.3
1988	921.6	169.25	503.38	133.9	175.8

Source: Compiled by the authors from: Comité Estatal de Estadísticas, Anuario Estadístico de Cuba, 1980, 1988.

La Habana, Cuba.

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The result of Cuba-USSR sugar-oil relationship without a doubt can be overestimated. Explaining the relationship in terms of actual prices will tend to overvalue the exchange. However, the barter trade takes on another dimension, that is a guaranteed market and the purchasing power acquired which allows a country with an small industrial base to acquire most of the inputs necessary to operate the economy. Based on the sugar-oil exchange, Cuba without a doubt can obtain oil in the needed quantities without having to worry about world market price fluctuations. Moreover, the purchasing power acquired on the exchange irrespective of the actual physical products bartered-oil plus some other commodities-is beneficial to Cuba but not to the degree reflected by the actual prices. On the negative, the price paid for industrial equipment is very high resulting from the poor quality of the machinery in addition to the excessive pricing which occur on the transactions. On many occasions, the question of sole source have hurt Cuba due to lack of convertible currency availability to find alternative markets and to optimize its purchases.

D: Impact of changes in the U.S.S.R. on Cuba's sugar market.

<u>With regards to Soviet agricultural policies.</u>

Presently, the Soviet Union is going through a period of significant economic and political transformations. The changes resulting from the present course will transform the economic and political organization of the country. As the center relinquishes power, the republics will gain political and economic independence providing them with additional control of their economic destiny. That is occurring in the Soviet Union. It is the transformation from a centrally planned to a market based economy or the emerging system what without a doubt will affect Cuba's economy to a degree greater than anticipated.

As the Soviet economy evolves, the sugar sector of both nations will change and so will the sugar world market. Many of the changes in the Soviet economy will be difficult and almost impossible to predict during the transition period. However, changes affecting the demand for sugar affecting Cuba's economy will be examined. There might be several scenarios which could alter USSR-Cuba sugar relationship. Among possible changes are those altering the agricultural policy pursued by the Soviet leadership given their domestic economic goals. So far, no changes or significant departures have been observed from the present agricultural policy course by the leadership.

Scenario I- Present course.

Policy: The main concern of the government is to provide for the very basic needs and to feed its population. Thus,

_Soviet policy-makers will concentrate resources in favor of grain and cereals production to feed the population.

_Trade policy will be oriented towards the importation of basic grains and cereals to satisfy basic needs as well as critical industrial elements needed to promote the better utilization of natural resources. For example: oil and mechanical industries.

_As a result of the above policies, the agricultural sector will remain on its present course and it will take longer to evolve because of the issue of privatization and the break of the state farms in the sector.

_There are not major improvements foreseen or planned in the sugar beets producing areas. For example, seed improvements, mechanization, better fertilization or foreign investments taking over farms in the Ukraine beet area.

_Present sugar producing plants engaged in the production of sugar in the beet area will not undergo immediate improvements. No foreign company has thus far decided to make major improvements or modification on any of the plants. Thus, beets production will remain within the present range and yields will not significantly increases which could alter output.

_Beet sugar production will remain at present levels. For the past five years sugar production have fluctuated within the range of 8.7 and 9.5 million tons raw value. Sugar beet yield will remain at the 26.1 to 26.6 metric tons per hectare

_Sugar yields will not change from the present levels of 2.7 to 2.8 metric tons per hectare.

_The amount of sugar imported by the Soviet Union within the next three or four years will not significantly change. It could increase depending on domestic production. Sugar is not a critical commodity in the Soviet Union when compared to other countries. Consumption exceeds 46 kilograms per capita and will grow. USA consumption does not exceed 28.5 kilograms per capita.

_Prices paid for sugar could be adjusted but the Soviet Union during this period will pay prices above the World market although it could still reduce the price from the present level of 0.24 cents a pound.

The basics for this present policy are as follows: the Soviet Union does not have the financial resources (convertible currency) needed to acquire the bulk of its sugar in the world market. The rouble is not convertible yet. Therefore, oil is needed by Cuba and sugar by the Soviet Union. The Soviet Union have extensive oil reserves which can be tapped to acquire and barter needed resources. Any barter with Cuba of sugar for oil allows the Soviet Union to dispose of suspected quality machinery, keep some plants running and more important maintaining a presence in Cuba with all its benefits and drawbacks. However, of extreme importance is the savings of convertible currency which this policy accrue to the Soviet Union. This policy conforms to the course agreed upon during CMEA sugar plan whereby Cuba will be the exclusive supplier of tropical agricultural products. Eastern European countries and the Soviet Union will reduce their sugar acreage and production while Cuba will provide the needed sugar. Cuba expanded the acreage dedicated to sugar cane cultivation in 1981 and CMEA plans were for Cuba to produce by 1990 approximately 12.0 million tons of sugar. Thus, we can conclude that within the next three or four years the exchange of oil for sugar will continue for as long as the oil production remain at the same levels and the Soviet leadership desire to assist Cuba. However, the Republics are gaining control of their oil production and this fact must be given adequate consideration.

In case the Republics in the Soviet Union gain complete control of their resources and the central government receive a type of federal tax, the exchange of both commodities could drastically suffer. Cuba could send 4.0 million tons of sugar but will receive less oil if prices for both commodities are based at world market prices or continue with a preferential price. In either case, the exchange could be done on barter basis, reducing the risk of having to obtain convertible currency which both parties are having difficulties earning. The net result could be limited benefits for Cuba with this type of exchange. Less oil could be exchanged for 4.0 million tons of sugar. At today exchange, a tons of sugar commands in the world market approximately 220.50 dollars while a ton of soviet oil commands 146.00 dollars. With four million tons of sugar you could only obtain 6.1 million tons of oil. Cuba could obtain the benefits of the exchange to some degree but a limited supply of needed oil. Thus, this could precipitate finding financial assistance or other partners with the potential of having to increase the foreign debt.

Scenario II- Altering the present course through minor improvements.

As the Soviet Union enters the agricultural transformation phase together with the expected rural society changes, Cuba's sugar trade will begin to feel the outcome of those changes. Among those minor improvements are better quality agricultural inputs and transportation. In addition, as joint ventures with specialized foreign concerns takes place, there is a possibility that better field techniques will be introduced on behalf of the domestic producers. Thus, during this phase sugar beets agriculture and industry could be positively improved. The following changes could occur in the sugar beet areas of the Ukraine and other republics while the major agricultural policy of the country remains committed towards the production of grains and cereals.

_With the introduction of better seed and fertilizers, yields improvements will result. The yield per hectare could increase from the present levels of 2.80 to 4.80 as in Turkey. This improvement is not as high as those of the rest of Europe or the United States. However, output is not expected to double because of the difficulties experienced with transportation from the field to the sugar factories.

Significantly, if the yield improvements does not provide additional quantities of sugar, greater than fifty percent of the present production, the Soviet Union would import substantial amounts of sugar to cover production deficits. Deficits were running in the order of 4.7 million tons of sugar. In 1990 Cuba supplied 3.8 million tons of sugar to the Soviet Union which represents over 60.0 percent of the total amount of sugar imported.

If the above scenario holds, the Soviet Union will be in an excellent position to demand price concessions from Cuba. The base for consessions will be the reduced size of the sugar deficits as a result of the yield improvements and its accompanying reduction in quantities of sugar imported from other countries. Therefore, this implies for Cuba the following:

-- a significant loss of purchasing power.

-- a reduction in the ability to obtain needed amounts of oil.

-- a return to the open oil market again to acquire oil.

-- a need to generate substantial amounts of convertible currency during a period when the country have not been able to diversify its economy and to expand its export basket.

Scenario III-Beginning to run an efficient agricultural system

Once the Soviet Union begins to improve its farming methods, the sector ownership becomes mixed with more farms in the hands of the private sector and with better inputs transportation. Soon the the country will no longer require to import Cuban sugar. Sugar beets yield will begin to closely resemble those of Europe and the United States and the amount of sugar produced will cover most of its consumption requirements. This phase of transformation will account for a convertible ruble and the utilization of modern farm techniques. Joint ventures in the industry will be in process or beginning to be in place. Distribution difficulties would have been resolved as a result of the introduction of better marketing methods.

This phase will no longer requires the importation of sugar at premium or subsidized prices. Cuba will not be the preferred supplier due to its location and lack of reliability as a producer and seller. The Soviet Union will have access to sugar from reliable sources closer to home. Any major changes from the previous period will substantially increase sugar output. Cuba will become a supplier to the residual world market.

<u>Potential consequences as a result of the transformation taking place in the U.S.S.R.</u>

The transformations of the Soviet Union from a centrally planned economic system towards a market economy will certainly take place slowly and during the next two to five years, when the system begin to reorient itself in a new course. If the course is followed by the present Soviet leadership, Cuba must begin to diversify its economy away from sugar now, implement plans to become less oil dependent, find another trade partner capable of purchasing sugar and undertake a serious effort to expand the export basket. In the meantime, the oil sector in the USSR is temporarily undergoing a period of lower production due to lack of modern technology. For how long will the Soviet Union supply Cuba with ten million tons of oil is not known but, with the Republics asserting their newly attained economic independence, it seems that oil could not flow at the present rate unless it is paid for in convertible currency. That is less oil for the four million tons of sugar would be obtained from the Soviet Union.

As the Soviet Union modifies and alters the present system Cuba will be hard pressed to become more economically independent. Presently, no major disruptions will occur in the sugar export market unless

Cuba can not produce sufficient quantities of sugar to support its traditional buyers. If Cuba can not continue to produce consistently over 7.0 million tons of sugar, his traditional clients will begin to enter the world market and the price would be driven higher. Therefore, depending on how the period of adjustment affects the Soviet Union, the sugar world market price will be affected.

D. United States policy in light of possible changes in Cuba's leadership.

Implications for sugar in the domestic U.S. market and Cuba.

a) Historical perspective of U.S.- Cuba sugar relationship.

Prior to 1961 the United States was the major economic partner of Cuba. For the period from 1954 to 1960 the United States imported over thirty percent of the sugar in Cuba, on the average over 2.0 million tons of sugar at preferential prices from Cuba. In addition Cuba had a special tariff arrangement resulting on a differential of 0.1250 cents per pound of sugar imported. The remainder of Cuba's trade in the majority over 70.0 percent was conducted between both countries given their proximity and amicable relationship.

However, by the middle of 1960 Cuba pursuing an offensive policy leading to the installation of a Marxist-Leninist regime in the country, decided to trade oil, sugar and enter political and economic ties with the Socialist bloc countries. Soon, merchandise and delegations began to be exchanged and oil trading was among the very first commodities received in Cuba. The next step was a request from Cuba to the U.S. oil companies to refine Soviet crude oil. The replied by the oil companies in June 1960 was negative and with the following explanation "on the ground that this step would damage Venezuela." Historian Hugh Thomas on his book *The Cuban Revolution* explained the refusal as follows: "It seems that the secretary of the U.S. Treasury had strongly urged a refusal by the companies to process the oil, despite the companies' own reluctance inclination to agree." Nonetheless, it seems that Cuba's leadership had all the intentions of provoking an incident to find an excuse to damage the excellent diplomatic and commercial relations with the United States. The government of Cuba replied several days later to the negative announcement of the oil companies. In the meantime on June 22, Secretary of State Herter, appeared before the Senate and "requested a bill authorizing President Eisenhower to cut the sugar quota." Cuba's reply came on June 25 when Fidel Castro in a public address to the people indicated: "because of the policies undertaken by the U.S., Cuba would not starve, but even necessities would be lacking. There would no doubt be an armed attack. For every cut in the quota, however, a U.S. sugar mill would be expropriated."[3] This offensive and defensive dialogue gave way to the embargo and the sugar quota loss for Cuba.

Thus a seemingly offensive act of a young revolutionary government-trading with the Soviet Union-provoked the United States to take actions. The Eisenhower administration viewed the installation of a socialist, marxist-leninist regime in Cuba, as a defensive treat. Consequently, On June 28, 1960 the U.S. House of Representative Committee on Agriculture approved a bill on the sugar quota. But also on the same day Fidel Castro signed an executive order which stated that Texaco Oil refinery in Santiago de Cuba had to refine Russian crude oil or be nationalized. The remaining U.S. refineries were nationalized on June 30. On July 6, 1960 President Eisenhower administration utilizing his prerogative granted by the Sugar Act as amended-- "to cut any foreign quota if such action was in the national economic interest"-- decided to reduce Cuba's sugar imports during the second half of 1960 to under 40,000 tons. This was done on the grounds that "Cuba's sugar sales to the Soviet Union and other socialist countries put into questions the country's ability to continue to be a reliable supplier to the U.S. market."

Soon after, the U.S. government instituted this reduction of purchases, the Revolutionary regime began to take a series of offensive measures preparing for the moment of final nationalization. The Eisenhower's government reacted setting the sugar quota to zero for 1961. In the meantime, the Soviet Union anticipating the events, announced the purchase of 700,000 tons of sugar that the U.S. had cut from Cuba. Additional nationalizations during the month of August included the Cuban Telephone Company, The Cuban Electric Company, all the sugar mills and the remainder of the refineries. Several months expired and while the U.S. presidential election was getting in full swing, Cuba's agrarian reform was implemented. However, on 13 October, the Eisenhower administration already in its final stage, ordered a "complete ban on all exports to Cuba except for medicines and some foodstuffs." Finally, on 25 October, the cat and mouse retaliatory game ended when Cuba nationalized 166 U.S enterprises.

Following the United States economic embargo was the rupture of diplomatic relations on January 1961, an act which lasted until today. The total U. S. exports embargo placed in 1961 caused severe disruptions in Cuba's economy and made possible for the United States Department of Agriculture to redistribute the sugar quota to other supplies, the Dominican Republic, Philippines, etc. This caused immediately a shift in the sugar export market and a reorientation of Cuba's trade. The Soviet Union became the preferred sugar partner and in 1972 Cuba enters CMEA and definitely becomes the sugar supplier of the Socialist bloc until 1990. Although the Soviets did not paid the same price per ton as the United States at the very beginning of the Revolution, soon they began paying preferential prices higher in magnitude than the previous partner while supplying all oil required to keep Cuba's infrastructure running. The economic embargo imposed in 1962 with very minor modifications is still in force today.

Current U.S. policy towards Cuba and sugar

For the past thirty years the economic embargo has not been as effective as planned by those imposing the sanctions in 1960. During the Carter administration some provision of the original embargo were modified or abolish. But, during the administration of President Regan must of the original clauses has been reimposed. The present embargo, with some minor modifications and only one exception which is the clause that prohibits vessels calling port in Cuba to deliver merchandise in a U.S. port, has been reinstated. However, Cuba faced with financial and commercial isolation has reacted with several measures to evade the embargo.

For a number of years, the leadership of Cuba to ameliorate the effect of the embargo employed its scarce resources towards the creation of an infrastructure comprised of companies doing business on behalf of Cuba throughout the world. The purpose of the companies were to acquire products not available in Eastern Europe or the Soviet Union crucial to the functioning of the country infrastructure. Thus to acquire needed parts and equipments, the Ministry of Interior created a department known as M.C. (Convertible Currency--MC). The purpose of the MC Department is to circumvent the embargo. However, the infrastructure created has been effective and ameliorated the embargo effect. It has not been until recently as a result of the events in the Soviet Union and Eastern Europe, that the embargo began to interfere and hamper the functioning of the economy.

Presently, the U.S. embargo is taking a very heavy toll in the economy as a result of the leadership not diversifying the economy. Cuba's entrance in CMEA did not provided the desired results because the organization short of extracting needed tropical commodities (sugar, tobacco, citrus) always was a failure. The events of Eastern Europe and the period of transformation which the Soviet Union is undertaking, will seriously create disruptions in the economy. Cuba until 1990 traded over 85.0 percent of all its products with the former Eastern European countries members of CMEA and the Soviet Union. The sugar relationship developed with the United States prior to 1960 will never be regained due to changes in the domestic sugar market. The current policy towards Cuba is to isolate the country commercially and financially.

The Farm Act of 1990

Sugar is presently imported in very limited quantities by the United States under the Sugar Act and other arrangements. The purpose of the act and the sugar policy of the United States is to provide protection to the domestic sugar producer and not to the consumer. The objective of this policy is to insulate the domestic market from the undesirable effects of price fluctuations in the world sugar market. This policy has propelled the domestic sugar production of beets and sugarcane, has created a new industry of sugar substitutes (HFCS, Aspartame, etc,) and has kept domestic sugar prices very high for the consumer.

In order to enforce the Sugar Act provisions there are a series of trade barriers enacted to control the importation of sugars. The absolute tariff quota provision as legislated prior to 1982 was changed by Presidential Proclamation. Sugar has always been subject to customs duties at the port of entry. The tariff applicable to sugar within the quota provision is 0.625 cents per pound and sugar coming from outside the quota provision is subject to 16.0 cents per pound levy. Thus, there is no apparent restriction in the importation of sugar as long as the cost of production is above 16.0 cents per pound which is almost a certainty in the world. In so far as sugar imports coming to the United States outside the Sugar Act only those entering the country under the re-export program provisions-tolled-for alcohol production or sugar refining are quota exempted; however, lower duties applies with very strict documentation (drawback claims) to be filed but subject to a 90 days limitation under the program.

The program has undesirable effects. As legislated by Congress, it must be conducted at no cost to the U.S. government, however, the consumer paid very high prices for the cost of protection and insulation from world market prices. In essence, it is a subsidy transfer from the consumer (loss of consumer welfare) to the sugar producer in the form of high prices at the grocery store. For those sugar producing countries, it has meant less sugar imports into the United States. However, for those participating countries it has meant preferential prices above the world market.

The total imports of raw sugar authorized by the Secretary of Agriculture under the Sugar Program for 1991 will be less than 2.0 million tons. In 1981, the last year of free sugar imports the amount exceeded 4.6 million tons. Previously during the late fifties when the provisions were not to boost domestic sugar production, but to insure an adequate return for the domestic producer the quantity imported exceeded 4.0.million tons. In 1958 Cuba exported to the United States under the quota arrangements 3.4 million tons which represented over 73.0 percent of all sugar imported and over 36.0 percent of the total sugar available for consumption. Irrespective of the sugar policy past and present, Cuba quota was set to zero in 1962 and its quota was subsequently reallocated among other preferential suppliers.

The loss for Cuba of the U.S. preferential market given its new political orientation was not devastating until after the events of 1989 in Eastern Europe and the Soviet Union. As the quota was set to zero in 1962 by President Eisenhower, the Soviet Union decided to step in an exchange with the United States Cuba's sugar partnership. As the Soviet Union enters a period of transformation, the loss of the quota will have additional negative consequences for Cuba. Among those, the loss of a major market ninety miles away, access to the U.S. financial market and the inability to acquire modern technology to rebuild the industrial infrastructure. Unless the embargo is changed, and the Sugar Act is amended, Cuba is excluded from the United States Sugar Program for the foreseeable future. There are no provision on the Sugar Act presently in force to accommodate Cuba's sugars.

However, while Cuba continue to be a predominant sugar producer in the world market, the loss of the U.S. preferential prices will be shortly felt and will make a difference overtime. Sugar, is paid under the Soviet Union preferential market arrangement at approximately 0.23 cents per pound. But, the nominal price paid by the United States to its preferential customer is very close to the price paid by the Soviets to Cuba. The major difference is that Cuba does not receive convertible currency for the sale of sugar and the remaining balance if any, over the cost of the exported petroleum and petroleum product must be spent on Soviet manufactured goods. Therefore, the lack of convertible currency availability, coupled with the limited export basket available and the difficulties encountered with its former partners in terms of available supplies, makes it very difficult for the country to operate. Nonetheless, the advantage received by Cuba for the Soviet largesse has meant many possibilities for the country in other sectors of the economy. For example, the possibilities of setting up a health infrastructure (in terms of availability of care) not known to any other developing country in the world.

The GSP and the CBI.

The Generalized System of Preference known as GSP and the CBI deals with the importation of sugar in somewhat preferential fashion. Both programs benefits the developing economies of the Caribbean which are sugar producing countries and partners of the United States.

The rules for both programs are similar and treat sugars similarly to other qualifying products. It exempts certain products from custom duties as long as certain eligibility requirements are fulfilled. Those requirements has to do with competition and are as follows: If a country supplies over fifty percent of the total products imported under consideration by a single importer, the product is disqualified to receive the GSP benefits. If the product exported exceeds the level of the Gross Domestic Product (GDP) for the country above $88,878,327 in 1989 the product is also disqualified. The CBI can compliment the Sugar program and that was an important component to benefit and to ameliorate the impact of the program on the Caribbean sugar based economies.

Cuba presently does not qualifies in any of these programs. It will require the elimination of the U.S. embargo. Any participation also will have to be subject to legislative consideration by the U.S. Congress and the President of the United States.

The Clean Air Act amendments of 1990 and the demand for ethanol.

A market for ethanol was created in the United States with the passage of the Clean Air Act Amendments of 1990. Meanwhile, the Corporate Average Fuel Economy (CAFE) standards of 1978, provided credits to automobile manufacturers for the development and use of autos using non-petroleum based alternative fuels. Recently, the Energy Policy Act promoted the use of alternative fuels vehicles and required "to phase in use, in certain fleets, vehicles which operate with clean burn gasoline" [4] In addition, Federal Highway Administration regulations mandate the use of clean burning gasoline. Therefore, to undertake the production of clean burn fuels, known as reformulated gasoline, an oxygenant is needed. Ethanol meets the properties required because it blends well with gasoline.

Ethanol capacity in the United States is limited but it is projected that will grow substantially to meet the projected demand by 2010. Ethanol plants in the U.S. used corn as feed stock and other inputs. Production in 1992 reached an annual average of 106.3 million gallons per year with stocks annual averages of 30.6 million gallons per year. Estimated consumption by 1995, could reach 113.4 million gallons per year. The projected growth for this market will be 63.5 percent between 1990 and 2010.[5] Thus, an import residual market will be created if supply can not meet demand by the year 2005 when a major market growth is expected.

Cuba could compete for a small share of this market and benefit from using its installed capacity. Participation in the U.S. market would be feasible after the U.S. embargo is derogated and once Cuba makes a policy decisions in regards to molasses usage. There are 17 distilleries on line with a capacity of 66.0 million gallons of alcohol per year.[6] Rum production for exports which use the available molasses is expected to continue at higher levels and it is a mature industry with an existing international market. Therefore, the potential to expand the production of ethyl alcohol is feasible and will be a viable alternative for the sugar industry.

Possible Impact of "Uruguay Round" on U.S. sugar policy and market access.

It has been the purpose of GATT and all the signatories members to seek that commerce and commercial policies enhance trade rather than reduce trade. The European Community with the Common Agricultural Policy and the United States with its different farms program as well as several other countries such as Japan, protect their agricultural producers. The General Agreement of Tariff and Trade objective is the elimination of trade barriers across product lines. Under its provision, it does not allows for the enforcement of any trade barriers which ban the importation of agricultural product into a country. Thus for a number of years, the GATT members almost on a yearly basis and through out the year in consultation assiduously worked towards the completion of the trade rounds.

The Uruguay Round, as it is presently known, work towards the elimination of agricultural trade barriers. Countries such as the United States upon the completion of the trade round must modify its protection program and trade barriers for the purpose of improving foreign trade flows. In a nut shell GATT seek the free flow of products and the preservation of fair competitive rules for all and among all countries of the world. Consumers will benefit in the long run as free trade prevails.

An effect of the Uruguay Round presently underway, is to eliminate agricultural trade barriers. Thus, it will affect the importation of sugar into the United States. Under the rules of the GATT, the quota will be changed to a tariff equivalent and thus several countries could import sugar into the United States under competitive rules. This will mean that a displacement of inefficient producers could happen proviso that no agricultural program is installed to protect the sugarcane farmers. The sugar substitute industry will also become less price competitive and the price of sugar will be sharply reduced at the supermarket from the present price of over thirty five cents per pound. However, the Round has failed to produce results as of today.

For the Uruguay Round to succeed, several tons of sugar could flow to the United States market on competitive levels and high prices. Dismantling the quota mechanism in the United States presently will reduce sugar prices proviso sufficient available supplies. In the short run, sugar prices will be very attractive to cover the shortage in the market. After the producer adjustments and quantities recovered, the price of sugar will be reduced substantially and the consumer will receive the benefit.

For Cuba the perspective of becoming a participant in the United States market is contingent upon the establishment of full diplomatic relations. As a premier sugar producer depending on the ability to be cost competitive and to readjust the industry to competitive world levels avoiding over production is an essential element for the potential sugar trade with the U.S.

[1]. Juan Herrera, Presentación del Informe de Rendición de Cuenta sobre la Actividad Agroindustrial Azucarera y sus Derivados, **Granma, 5 July, 1991, pp. 1-4.**

[2]. Ibid. pp.1-4

[3] . Thomas, Hugh. The Cuban Revolution, Harper Torchbooks, Harper & Row Publishers, 1971, 1977. pp. 510-511.

[4] . Annual Energy Outlook 1993 with Projection to 2010," Report No. DOE/EIA-0383 (Washington, D.C.:Energy Information Administration, Office of Integrated Analysis and Forecasting, U.S. Department of Energy, 1993).

[5] . Petroleum Supply Monthly, Report No. DOE/EIA-0109 (93/06), Washington, DC.:Energy Information Administration, Office of Oil and Gas, U.S. Department of Energy, June 1993. See Appendix D. Table D2, pp.148 and Table E2.

[6] Oscar Almazan del Olmo, "Los derivados de la caña de azucar: Actualidades y perpectivas en Cuba," Cuba Socialísta, 31 (January-February): pp.51-71