THOUGHTS ON THE CUBAN SUGAR INDUSTRY
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I. Introduction

Remember the classic Cuba axiom "Sin azúcar no hay país"? The question should now be asked: is this principle still valid in the last decade of the Twentieth Century, after approximately 200 years of dominating all aspects of the island's psychological and economic existence? This question has to be raised regardless of whether the country has a controlled economy under a communist dictatorship or a free market economy under a democratic government.

A central issue in formulating any economic strategy for Cuba is directly related to the sugar cane agroindustry; its impact and contribution to the future growth of the economy. Will it be a dynamic source of progress or will it be a constraint?

I believe there is a future for the Cuban sugar agroindustry, but it has to be based on sound agribusiness principles and not on a state-owned or controlled monopoly or oligopoly as it was in the past.

A re-evaluation of the role of sugar within the Cuban economy can set off a very lively debate -which I strongly believe should take place- but we shall limit its discussion to an overview of the current situation and to comment on some of the changes that appear to be taking place in Cuba at this time.

II. Current Situation

Information available on Cuba reflects an intense preoccupation on the future of the island's sugar industry. The sugar problem has come about as a direct result of the break-up of the Soviet Union and the end of its 30 years of considerable economic aid. The assistance basically was made up of purchases of large quantities of Cuban raw sugar paid at prices substantially above those of the world market, coupled with shipments of oil priced below international prices.

Fidel Castro is in the process of adjusting to the new political and economic realities of a post-Soviet world. He hopes to compensate for the loss of the Soviet sugar subsidy with a strategy based on attracting foreign investment and joint ventures from Western and Far Eastern countries. Actually, he began this scheme on a limited scale a few years ago with tourism. Now, according to Carlos Lage, Politburo member in charge of economic matters, necessity has forced an opening of other sectors of the economy, including sugar.

This aperture to foreign investors must not be confused or construed as a signal that Fidel Castro has, or is willing to, initiate a transition to a free market economy or is willing to build a democracy like the countries of Eastern Europe and the former Soviet Union are doing. This is clearly capitalism *a la* neo-Castro.

III. The Consequences of the Loss of Soviet Aid

Sugar is still the backbone of the economy. In dealing with sugar under present conditions, I believe, the first step is to restructure this key economic sector. The classical Cuban sugar economy model -based on guaranteed markets and premium prices- abruptly died on 27 December 1991 when the Soviet Union ceased to exist.

Since the country is bankrupt, ways and means are being sought by the government to implement a restructuring policy hopefully with the participation of international sugar businesses. As a result, several questions arise.

> Can the government make conditions sufficiently attractive and persuade foreign investors to come in?
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> How competitive can Cuban sugar production become in the absence of all external subsidies? and,

From a political viewpoint, will these measures help sustain Fidel Castro in power and for how much longer?

The backdrop of a new sugar strategy revolves around four basic points.

Cuba's sugar milling complex is old. Upwards of 90 percent of the factories were built before 1925. Most of the sugar is manufactured as raws to be further refined by importers. Capacity to make refined sugar is limited to less than 900,000 tons. The island is not an efficient sugar producer and production costs are surely way above today's world market price of around US$0.10 per pound.

The Cuban sugar industry for most of the 20th century has been subsidized by a foreign country. First, by the United States until 1960 under the old Sugar Act and then by the ex-Soviet Union until the end of 1991. Considering sugar alone, the loss of Soviet economic aid and trade is staggering. Cuba's sugar exports to that region of the world in 1992, in terms of volume, will be about 2 million tons or 1.8 million tons less than in 1991. Fidel Castro has stated that this projected loss will be equivalent to about US$2.5 billion. Soviet prices in 1991 were reported at US$0.36 per pound and those for this year are estimated at about US$0.09.

Cuba's primary source of energy is imported oil. Until the end of 1991 one ton of Cuban sugar used to buy 7 tons of Soviet oil. The ratio now is 1 ton of sugar to 1.7 tons of oil. This means that Cuba was able to buy 13 million tons of oil -its annual consumption- with 1.9 million tons of sugar, but now needs to sell 7.2 million tons of sugar to import the same amount. As a result Fidel Castro and Carlos Lage were saying that oil imports this year will be around 6 million tons. In reality even this figure might turn out to be too high.

Cuba now needs to develop new markets and marketing techniques for its sugar. Sugar authorities are more accustomed to government-to government centralized trade negotiations than free market operations.

IV. The Crisis Year, 1992

The gravity of the looming 1992 sugar disaster on the economy can be measured in terms of the foreign exchange that sugar sales can generate this year. Sugar accounts for more than 75 percent of the total value of Cuba's exports. I estimated that sugar sales this year (1992) will amount to approximately US$978 million compared to US$3.6 billion in 1991, a walloping drop of 73 percent in just one year's time.

With regards to the 1991/92 sugar harvest, Cuban officials have kept all production figures in secret, but do admit that it will be below the 7.6mmt produced the year before. My estimate for this year's crop is 5.8mmt. This is based on those statements made indicating the multitude of problems both of resources and logistical support that are being encountered as well the fact that operations were delayed by two months.

If the 1992 sugar situation is bleak in comparison with 1991 and previous years, it appears to me that there will be no noticeable improvement in 1993. In fact, USDA's first estimate for sugar crop year 1992/93 (June 1992) places the Cuban harvest at 6.0mmt or at the same level as the 1991/92 estimate. The bottom line is that the government of Cuba lacks the financial and material resources to prepare for next year's (1993) crop. In the medium and longer term -if the Castro regime does not fall- the situation could improve only to the extent foreign investors come in with needed capital and technology. In a post-Castro era the two key requirements are capital and management that will not only bring in processing technology but also an agribusiness concept to the whole industry.

V. The Three Faces of the Sugar Problem

Faced with a three-fold problem, serious difficulties in production, loss of traditional preferential market and lack of capital for repairs and maintenance, the government has to embark on a new approach. Based on the information available, it took as if Cuba is adopting a strategy that includes aligning output to market demand, promoting foreign investment, and vertical integration.

A. Aligning output to market demand

The first part of the restructuring program could well be to rationalize the size of the industry by reducing planted area and milling capacity to realistic market demand. This could be done by the dismantling of the smaller and more inefficient mills. Out of a total of 156 sugar factories the majority -82 gave a crushing capacity of 3,500 tons a day or less- are considered small and inefficient by today's world industry standards. The taking apart of small mills will not only reduce production costs but also make available cannibalized parts and machinery for other mills. There is no evidence that all 156 mills operated in 1991/92 harvest.

Since Cuba no longer receives preferential prices for its raw sugar, and world sugar demand is shifting from raws to refined, or whites, it must adapt production to world market conditions. Under these realities, diversification away from raw sugar and molasses into higher value added is needed. Products basically can be grouped into three categories: sugar, alcohol and by-products.

In the case of sugar the government wants to increase production and sales of refined sugar and high polarization sugar (99.2°), and also produce for export a high sucrose syrup using a Cuban biotechnological process.

B. Investments in communist Cuba

In order to achieve the above, Cuba has to modernize and most of all install additional refining capacity and is looking for foreign investors such as multinational sugar companies -not trade or commission houses- who have the required capital and technology. Some of these companies are already entering into ventures in the former communist countries of Central and Eastern Europe that produce beet sugar and have been exploring opportunities in the Commonwealth of Independent States (CIS) republics that produce beet sugar.

Cuba could present an interesting opening for European-based multinationals to position themselves in this hemisphere. Mexico and especially Canada could be important markets for refined sugar and could present interesting possibilities under a North American Free Trade Agreement(NAFTA) for non-U.S. sugar refiners.

At this time it is appropriate to bring up a related key issue concerning possible new foreign investments in Cuba made under the present regime. This point is directly connected with the complicated and highly politically sensitive question of expropriations of sugarcane farms *"colonias"* and mills made by the revolutionary government in the early 1960s, but never compensated, of properties belonging to Cuban citizens and corporations as well as those of the United States. Under a post Castro democratic government, the legal question of prior ownership could become an object of a very complex and lengthy litigation process.

C. Vertical integration

Over the last two decades research has gone into a more efficient use of the sugarcane industry by-products. Beside the traditional use of bagasse as boiler fuel for the mills it can be used to make paper pulp, compress boards for construction and as an ingredient in animal feeds. Sugarcane is a renewable source of energy that can be processed -directly from cane juice or from molasses- into fuel alcohol or ethanol.

As in the case of sugar refineries in Cuba -a country with a very large sugar sector- has a very small alcohol distillation industry with limited production capacity. This in part is due to Cuba's role as a supplier of raw sugar within the central planning scheme of the Soviet Union. Cuban raw sugar was refined by the Soviets, in Ukraine sugar beet factories during their off season. Fuel alcohol would give Cuba some margin of domestic fuel independence.

There is speculation of possible alcohol strategy that could involve a triangular venture whereby: Brazil would supply Cuba the technology and the distilleries; Cuba would produce fuel ethanol from sugarcane for shipment to Mexico and the latter would pay for the ethanol directly to Brazil with oil and thus pay off Cuba's debt.

A domestic renewable fuel like ethanol could become a very important asset for an oil starved country like Cuba. Oil is a principal source of primary energy and almost the totality of these requirements are imported -up until 1991 from the ex-Soviet Union.

D. Sugar and energy

In Cuba sugar and energy have a very close relationship. First, as a means of payment for imported oil and second bagasse is the country's second energy resource.

In 1989, Cuba's energy requirements totalled over 116 million barrels of oil equivalent, or 15.8mmt. On a per capita basis oil consumption at that time was about 8 barrels a day and rated as the highest among the developing countries of the world.

From the supply side, the major portion of Cuba's primary energy requirements are provided by petroleum (73 percent) and sugarcane bagasse (24 percent). The balance is made up of firewood (2 percent) and coal and others (1 percent).

Consumption of oil products in 1989 reached 228,448 barrels/day (83.4 million barrels a year or 11.3 million MT) and was broken down by products: residual (47 percent), diesel (23 percent), kerosene (6 percent), gasoline (12 percent) and other (12 percent).

In order to have an approximation of the quantity of ethanol that could be used domestically the following calculations are indicative. Assuming that motor gasoline demand in 1989 reached 10 million barrel/year (1.4 million MT) or about 484.2 million gallons of gasoline. For example, if Cuba adopted -as Brazil has- a national gasoline/ethanol blend of 88 percent gasoline and 22 percent ethanol, then ethanol demand would be 106.5 million gallons. In order to produce this amount of fuel alcohol 746,000 tons of raw sugar are required.

As the economy recuperates, the demand for gasoline will increase and if ethanol is used or exported, then also will be sugar inputs. It is important to point out that the U.S. is the world's largest consumer of reformulated gasolines that are blended by federal law with oxygenated fuels such as ethanol. As a result of the Clean Air Act of 1990, U.S. requirements of oxygenated fuels will have a strong incremental demand.

With an expanded alcohol production Cuba could also further increase its rum output as well as its pharmaceutical and biotechnological product lines, especially those for export.

The sugar-ethanol issue has to be carefully analyzed as part of a national sugar strategy. It could be an important option within an integrated industry strategy.

E. Foreign markets

Regarding the substantial loss of the former Soviet -at least the preferential treatment- and Eastern European markets, it appears that Cuban sugar authorities are trying to develop new markets such as Iran and South Korea and are interested in negotiating long term arrangements with refiners. They hope to secure market stability by means of long term contracts with refiners in industrialized countries who control distribution. Refiners can offer better conditions than trade houses and have greater financial resources. Also to negotiate, wherever possible, government-to-government contracts as in the case of Iran and South Korea.

As Cuba begins to adjust its sugar strategy to the post-Soviet era, the process of restructuring and its eventual results could have important political and trade implications for many interested parties both inside as well as outside the country.

VI. A New Home for Cuban Sugar

Where does this leave us? I believe that low key strategic planning should be made in order to find, first, internal solutions for Cuba within a diversified sugar sector. Second on the export side, for example, explore the possibilities of an expanded North American sweetener market resulting from a NAFTA agreement and maintain the CIS market.

The question being asked not only in Havana but in many cities in other countries is: Does there exist a home for the Cuban sugar that was traded to the Soviets and Eastern Europe? Will Cuban sugar displace domestic producers or foreign suppliers in any of the importing markets, particularly in the United States? These are very relevant questions.

Since sugar was first planted in the New World almost 500 years ago, this commodity has been the most politically sensitive and highly emotional of all those products traded internationally or for that matter even domestically.

It is important to point out that on the day that a significant political change takes place in Cuba the sugar issue will certainly be the most volatile items in any future Cuban-American agenda.

The time is right -now in mid 1992- to start looking for possible avenues of solutions to Cuba's sugar dilemma.

It is obvious one cannot go back to pre-Castro times when there was a Sugar Act in the United States and Cuba had a preferential market of over 3mmt. Also, it is evident that Cuba's sugar industry cannot continue to be a state-owned monopoly or operate as an oligopoly as it did under the "Ley de Coordinación Azucarera" from 1937 to 1958. Moreover, Cuba without a preferential market has to prove that it can be internationally competitive in the world or "free" market. The economic viability of an export industry is directly dependent on foreign markets. Cuba's domestic market justifies an industry of not more than 1.5mmt.

In the coming years two markets are of critical importance. These are the two historical buyers of Cuban sugar: the CIS republics and the United States.

A. The Commonwealth of Independent States

The CIS republics, as a group, are net importers of sugar, but the single largest potential customer is the Russian Federation. Although Cuba has lost the strategic political relationship it had in the context of the cold war, it is still of vital interest to Russia because that republic is the holder of Cuba's enormous debt that was contracted over 30 years with the Soviet Union.

Notimex, a Mexican news agency, on 28 July reported that the newspaper *Komsomolskaia Pravda,* published an interview with a spokesman of the Russian Foreign Ministry, Piotr Aven, in which the Cuban debt was placed at an equivalent of US$75 billion. Other sources place the aggregate debt at much lower level. The Deutsche Sudamerikanische Bank of Germany places the debt at US$22.4 billion. Also Cuba is heavily indebted to Western Banks for a further US$7 billion and has not serviced these obligations in many years.

Shipments of sugar from Cuba this year to Russia and the other CIS republics are about half of previous year tonnage. These countries are now buying through trade house or directly from a cross the border, Poland, or the East, Turkey and China. If Cuba cannot re-establish these transactions, it may very well be permanently displaced from those markets.

B. Is there a place for Cuba in NAFTA?

In an expanded North American trading block Canada is not likely to become self-sufficient in sugar and Cuba is a traditional supplier. In the case of Mexico, the sugar situation is substantially more complicated and not clear at this time since the official text of the agreement has not been made public. Mexico is a net importer of sugar and has bought significant amounts from Cuba in the past. It is understood that Mexico -if the agreement is ratified- could be in a position to develop a HFCS industry based on imported U.S. yellow corn and/or HFCS. Mexico is a very large consumer of soft drinks and the bottling industry is currently using about 1.3 to 1.5mmt of sugar a year. This is a natural market for HFCS as it is in the U.S.

Expectations are that Mexico with HFCS in six or seven years time could become self-sufficient in sweeteners and thus a net exporter of sugar. Under NAFTA, if Mexico is considered a net exporter of sugar, those surplus amounts can then enter the U.S. without any restrictions after the seventh year of the agreement. If this should come about, it would have very serious repercussions for Cuba with regard to future sugar market opportunities. It would thus not only close the Mexican market, but more importantly eliminate any potential possibility of opening up of the U.S. market.

The sugar industry -if markets can be secured and production can be made competitive- will surely have an important role in the country and will contribute to economic growth. Just as the Cuban economy cannot depend only on sugar, it cannot depend only on sugar, it can rely on just the service sector -tourism, free zone or *maquiladoras*.

The most important consideration that can be made at this time is not to pre-judge the industry in light of past performance or to place sugar on a confrontational track -even before changes take place in Cuba- but rather to examine ways and means by which in the future, in a Democratic Cuba with a free market economy, the sugar industry can contribute to the countries growth.