

**Market Trends in the Global Poultry Meat Industry
Lessons for Caribbean Producers**

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Introduction

Today I will be presenting a talk that starts out with a broad brush treatment of the entire global poultry meat market. Then I will bring the discussion back to the Caribbean. I hope to leave you with a good idea of how the world market is evolving and the role of Caribbean producers in the context of the world market.

World Market

There are many ways that the world market for chicken can be divided; by country, by product or by final market. All of those methods are valuable; however, I prefer to look at the world market in an unusual way, income quintiles. There are currently a total of approximately 6 billion people on the planet. These 6 billion people can be divided into five parts or quintiles of 1.2 billion people each by income. This article will show the unique production and trade issues that relate to each of the five quintiles. Examples of all five income quintiles can be found in the Caribbean.

Income Quintile Overview

<u>Quintile</u>	<u>Average Yearly Income Per Person In US Dollars</u>
1	\$25,000
2	7,000
3	3,000
4	730
5	365

As can be seen from the chart, there is a group of 1.2 billion people who have an average income of only one dollar per day, another group of 1.2 billion who earn an average of two dollars per day. The richest 1.2 billion people on the planet earn an average of \$25,000 per year. Chicken consumption is highly related to income. The following is an estimate of the average chicken consumption per capita of each of the five income quintiles. The quantity is given in kilos of eviscerated chicken equivalent. The richest quintile eats 22 kilos of chicken per year while the poorest eats less than one kilo per year.

<u>Quintile</u>	<u>Yearly Per Capita Consumption in Kilos</u>
1	22
2	17
3	8
4	3
5	<1

Fifth Quintile

This group of 1.2 billion people has an average income of one dollar per day and lives chronically undernourished in circumstances of unimaginable poverty and misery. They are mostly invisible to the rest of the world living as untouchables in Asia or isolated in impoverished tribes in Africa. Some people in Haiti may have at times fallen into this group. The largest absolute number of people in this quintile lives in Asia while as the largest proportion of a population this group (40%) lives in sub-Saharan Africa. The biggest single problem for this group is food security.

Future Production and Trade – Fifth Quintile

The fifth income quintile can not afford to purchase chicken meat of any kind. This would seem to shut the door on any possible production of chicken meat for this group. Nevertheless, there is one way that chicken meat can be provided to this group and that is through international relief agencies. The marketing of products to this group can be done by selling shelf stable products to relief agencies.

Fourth Quintile

The fourth quintile is a group of 1.2 billion people who earn on average \$2 per day. Their situation is not quite as desperate as the fifth quintile. Although this group does not face chronic malnutrition, they do experience grinding poverty. These are the visible poor. They are the ones that live in the crude shelters of Latin America, Asia and Africa. Currently in Haiti and the Dominican Republic people are to be found that fall into this category. They are too rich to normally qualify for emergency food aid but too poor to afford much beyond basic calories. Their participation in the market for chicken meat is small. Nevertheless, this group can, on occasion, treat themselves to a protein luxury. For chickens that luxury takes the form of about 3 kilos of chicken purchased exclusively from a live or wet market.

Third Quintile

The third quintile represents a significant jump in income from the last two quintiles. This quintile earns, on average, \$3,000 per year or \$8 per day. In this group can be found a significant number of people in China who have moved up from the fourth quintile recently, a big group in Latin America, India and the Middle East and a smaller number of Africans. A lot of people in the Caribbean fall into this category in places like Jamaica, Dominican Republic, Cuba and Grenada for example. Their purchase of chicken comes from both the wet market and from the cold chain market and totals 8 kg per year. Around the world this is a group that is in transition from wet markets to cold chain markets.

Wet Markets

About 50% the world's population purchases their chicken from a wet market, including many people in the Caribbean. Wet markets come in many varieties but the most common is a place where live chickens are held in cages until the customer chooses the bird to be slaughtered. That bird is then slaughtered while the customer watches. This custom is a fact of life for the 50% of the world's population that does not own a refrigerator. When living without a refrigerator, one way of preserving meat is to keep the animal alive until a few hours before it is cooked. The other 50% of the world's population purchase chicken in a cold chain. A cold chain is an interconnected series of refrigerated storage facilities and vehicles that bring slaughtered and chilled chicken to consumers who continue the chain by taken meat home to refrigerators. Most people in the Caribbean purchase their chicken from the cold chain.

Those people who purchase chicken in a cold chain eat a lot more chicken than people who purchase chicken in a wet market. As can be seen on the following chart, the wealthier cold chain group eats nearly six times as much chicken per capita as the poorer wet market group. In world terms chicken is a luxury product and its temperature at the time of sale and quantity purchased are both highly correlated to income.

Group	Consumption of Chicken Millions of Metric Tons	Chicken Per Capita Kilos
Richest 50% Cold Chain	51	17
Poorest 50% Wet Market	9	3

Although the world's poor purchase relatively little chicken, the price paid for that chicken is relatively high and in some cases shockingly high. Some consumers spend up to \$4 per kilo. The world's poor are spending about \$20 billion on wet market chicken to consume 3 kilos of whole chicken per capita. The richest 50% of the world's population spend \$100 billion to purchase 17 kilos of processed chicken delivered in a cold chain. The total world market for chicken meat is therefore roughly \$120 billion dollars.

The \$20 billion being spent in wet markets around the world represents an opportunity. The opportunity is to develop an alternative for wet market customers such as shelf stable chicken products. Such products could be domestically produced in low income countries or be part of the international trade of food products. The variety of shelf stable products that could be produced with chicken is limited only by the imagination and the ability to take advantage of the new packaging technology.

The production of chicken in areas dominated by consumers who are in the lower quintiles is highly income elastic. That means that if incomes grow, chicken consumption growth will be rapid. The flip side of that coin is that if incomes fall in a world recession, for example, then chicken consumption will fall rapidly. In areas of rapid economic growth, increasing numbers of consumers will graduate from the wet market to purchasing items in the cold chain.

Second Quintile

Second quintile income jumps up to an average of \$7,000 per year. Many people in Russia, Eastern Europe, lower income North Americans, and upper income groups in Latin America, India, China and the Middle East inhabit this quintile. Many people all over the Caribbean fall into this category in places like Jamaica, Dominican Republic, Barbados, Trinidad and Tobago, Antigua and Barbuda as well as the Bahamas. This is the first 1.2 billion person group so far mentioned to all have refrigerators. This quintile is looking solely for cold chain products, fresh and frozen chicken. They eat a lot of chicken, 17 kilos per capita (20 billion kilos per year). This is a group that is keenly interested in low cost chicken.

Future Production and Trade for the Second Quintile

The consumption of chicken meat by the second quintile is highly income elastic just like the lower income quintiles. In good economic times consumption will rise rapidly and in poor economic times consumption will fall rapidly. This is a group that is interested in the cheapest chicken available. Therefore, it is a group that is a natural customer for such products as US leg quarters or Brazilian small whole chickens. The vast majority of international trade by weight is directed to this quintile and this is the quintile that is the motor of world chicken production growth.

First Quintile

In this quintile income jumps to an average of \$25,000 per year. These are the richest inhabitants of the world. They are concentrated in the United States, Western Europe and Japan but include the wealthiest people from every country. Every country in the Caribbean has some people who live at this level of income and, of course, virtually all tourists that come to the Caribbean are in this income quintile. This quintile, 20% of the world's population, is able to garner 80% of the world's income. The consumption of chicken by this group is not very much higher than in the second quintile. However, the value per pound is much higher. There is a lot of competition for the protein demands of this group from beef, pork and fish not to mention meat abstinence on the part of vegetarians.

Future Production and Trade for the First Quintile

Consumption of chicken meat by the first quintile is not income elastic. Increased income does not raise consumption. Nevertheless, increased income does affect the form of consumption. As income rises more of the further processed and value added products made from chicken are sold to this quintile. It can be expected that the per capita consumption of this quintile will rise slowly in the next 10 years while the value of the chicken products consumed by this quintile will increase more rapidly. Rapid growth in the international trade of highly further processed poultry products can also be expected. Oddly enough, trade barriers for highly processed chicken products are less problematical than for bulk chicken.

Globalization of Demand, Supply and Competition

The demand for chicken meat products from each of the five quintiles is in the process of becoming globalized. There is a growing convergence of demand around the world in the same income levels. This is most evident in the highest quintile where consumers demand similar processed and further processed chicken products all around the world. However, even in lower quintiles there is an increasing convergence of demand. The second quintile no matter what country they live in purchase mostly whole and cut-up fresh and frozen chicken. The third and fourth quintiles purchase live or wet market chicken regardless of their country of residence.

The same drivers of the globalization of demand have led to the globalization of supply as well. Technology allows for ever faster and cheaper communications and travel that help the international coordination of business. The increasing technological parity among a growing number of countries in poultry production leads to the globalization of supply. In other words the growing of chickens uses basically the same technology around the world. The only differences to be found are in a few hermit nations.

With supply and demand both becoming globalized it is clear that competition will become globalized as well. As large national poultry firms from several different countries move overseas through exports and foreign investments they will find the same rivals in every market. A small number of global competitors, probably less than a dozen will soon be found selling a significant percentage of all the chicken products sold everywhere on the planet.

It is early days in the globalization of chicken demand, supply and competition compared to say computers or automobiles. Nevertheless, the path taken by those other industries is instructive to the chicken industry. Firms whether they be chickens or computers first became involved in international competition based on simple exports. Exports often then lead to foreign direct investment in subsidiaries. The next step comes in the development of a global outlook and the use of a variety of tactics to develop a network of strategic alliances and subsidiaries.

There is an opportunity for Caribbean producers to establish strategic alliances, joint ventures and know-how agreements with global competitors. They need the local knowledge that you have about this market to better compete in the Caribbean. It may be possible to establish mutually beneficial business arrangements such as the one in Panama between Tyson Foods and the Melo group.

Caribbean Producers

In the Caribbean you have a David and Goliath situation. The Caribbean is David with 400,000 tons of total chicken production and places like the United States and Brazil are the Goliaths. The US alone produces 14 million of tons of chicken. An increasing percentage of chicken eaten in the Caribbean is imported from the United States, an estimated 30% now compared to 25% just five years ago. What is a Caribbean producer to do? Although there are some obvious negative problems for Caribbean producers, let us look at the positives;

Costs are not Excessively High

There are three levels of production costs in the world, low, medium and high. The countries with low levels of production costs are generally countries that export large amounts of grain like the United States and Brazil and have large poultry industries that can take advantage of huge economies of scale. High cost countries are those countries that levy an extremely high tariff against grain such as Colombia and Venezuela. Medium cost countries are those places that do not levy significant tariffs on grain. Many countries in the Caribbean fall into that category. The cost of producing chicken in the Caribbean is neither very high nor very low but rather somewhere in the middle.

The Local Market is Diverse and Valuable

The market for chicken products in the Caribbean includes a large variety of high, medium and low value products because of the food service needs of the tourist industry combined with the normal variety of products for all income levels that live in the area. In other words the local market is both diverse and valuable.

Local Labor Costs are Low

Compared to labor costs in the United States, labor costs in the Caribbean are relatively low. That provides an opportunity for labor value added products.

Strategy First Quintile

In order to develop a strategy for the Caribbean poultry industry it is important to think about the advantages of the industry and how to leverage those advantages to sell chicken profitably to each of the five income quintiles. Let us look at each quintile as a marketing opportunity.

The combination of resident population and tourists that belong in the first quintile of income provide a large market for high value poultry products. When marketing chicken to this quintile the raw material price of whole chicken is relatively less important than when marketing to other quintiles. What is important is the ability to provide the high value added products in the quantity and quality required.

There is potentially an important advantage for locally produced fresh chicken to supply this most profitable and most demanding of markets. In this market there is an advantage in being physically close to the decision makers such as chefs in restaurants. For example, chefs may require an extremely fresh Label Rouge type chicken of a certain size which could only be produced by a local poultry company. Imported frozen chicken just would not be the same. Certain consumers will pay extra for fresh local product from a business that they trust and with whom they share patriotic feelings about their country. Value added products developed with the local taste in mind may also find great acceptance in local first quintile consumers.

Although the competition to provide chicken products to the first quintile will be fierce, I believe that developing products for the first quintile customers will be the most profitable area for local poultry producers in the long run. In the case of proprietary recipes, it may even be profitable to export the know-how if not the chickens to produce Caribbean style chicken products.

Even exports may be possible. Think of the potential market of all the 1st quintile consumers who have visited the Caribbean at least one time on vacation. You don't need to have any production of chicken to be a major chicken exporter. Hong Kong is an example of huge exporter of chicken that does not produce chicken. One export scenario is to import cheap raw material chicken from other countries such as Brazil or the United States into a free trade zone, add value to that raw material in the form of further processing and then export the finished products without allowing the chicken to enter the local market. Chicken that can be purchased for \$400 per ton could potentially be transformed into a cooked product that is worth \$2,000 per ton using inexpensive labor and natural gas as well as proprietary Caribbean recipes. Fully cooked chicken has few non-tariff barriers in most markets.

Second Quintile

Second quintile consumers provide a challenging marketing problem for Caribbean producers. They have enough money to buy lots of chicken but they are more interested in the cost of the chicken than the first quintile. This is a market susceptible to Brazilian whole chicken or US leg quarters if no tariff protection were available. One strategy is to maintain high tariff barriers to exclude imported chicken. The risk in that strategy is that the barriers may change over time. A poultry company certainly wants to be in this market because it provides the largest portion by weight of chicken sold in the Caribbean but it may not want to depend entirely on this market. Strategies for appealing to this group of consumers are similar to those used on the first quintile, patriotism, the local fresh nature of the product and local preferences. However, it has to be recognized that price will be the major determinant for this group.

Third Quintile

The consumers in the third quintile are solely interested in the price of chicken meat and care not one bit for any other reason for purchasing chicken. They don't have enough money to buy all the meat they would like to buy and therefore are looking only for the best deal on animal protein they can find. Some consumers in this quintile purchase live chickens. Live chickens, of course, will not be imported from other countries. One possible strategy is to encourage the survival of live markets to be able to sell local chicken to this group. Another strategy is to sell inexpensive "New York Dressed" or Mexican type chicken to this group. Mexico has achieved a market barrier of sorts by selling chickens with viscera to this quintile. Since it is impractical to export chicken with viscera from the United States there is no competition in Mexico for this product. The yield on Mexican type chicken is 90% and the price can be very low.

Fourth Quintile

Consumers in the fourth quintile purchase a small amount of chicken in a live market. The only way to market to this group is to encourage the survival of some live markets. Consumers in this group will not be able to purchase much chicken until their income improves.

Fifth Quintile

Thankfully there are very few people in the Caribbean that are forced to live at the level of the world fifth quintile. They depend on food aid in order to survive. There is no way to market to this group other than indirectly through food aid agencies for which there is limited demand for chicken products.

Final Word

Let us hope that over the next 10 or 20 years economic growth and a better distribution of income will allow the fifth quintile to become at least as rich as the fourth quintile is now and the fourth quintile will become as rich as the third quintile is now and so forth. That happy set of events would unleash an explosion in chicken demand around the world (and improve the chances for world peace). The following represents that best case scenario.

Quintile	Per Capita Consumption Now	Future
Best Case Scenario		
1	22	25
2	17	22
3	8	17
4	3	8
5	<1	3
Average Consumption	10 kilos	15 kilos
Population	6 billion	8 billion
Total Chicken Production	60 billion kilos	120 billion kilos

Although the best case scenario is enjoyable to think about, the worst case scenario also deserves sober contemplation. The worst case scenario is widespread war and economic depression. One can only hope that the following scenario where consumption slips down a notch is highly unlikely.

Quintile	Per Capita Consumption Now	Future
Worst Case Scenario		
1	22	17
2	17	8
3	8	3
4	3	<1
5	<1	<1
Average Consumption	10 kilos	6 kilos
Population	6 billion	5 billion
Total Chicken		
Production	60 billion kilos	30 billion kilos

Although I can not say that higher chicken consumption will lead to world peace, I can say with certainty that world peace would lead to much higher chicken consumption. I expect Caribbean chicken producers to prosper in the future by using their strengths to capture key profitable markets in the Caribbean. Even the export of value added product is not out of the question from a free trade zone.