Part 1

The Food Production Chains Environment

Chapter 1

Environmental Changes Affecting Food and Agribusiness: What Are the Trends?*

The objective of this chapter is to share some important changes in the macro-environmental variables that may affect more companies operating in food and agribusiness industry.

I will use the traditional PEST analysis to summarize the major thoughts. The PEST (or STEP) analysis is a traditional tool to understand macro-environmental changes where "P" represents the political–legal environment (institutional environment), "E" refers to economic and natural environments, "S" is for the socio-cultural environment and finally, "T" is for the technological environment. These four environments help to organize the macro-environmental variables and are the first and very important "step" in strategic planning processes.

Starting with the ***political–legal*** environment, we may say that instabilities in Iran and other Middle East countries, North Korea and Northern African countries are affecting oil prices, together with the growth in oil consumption from emerging economies. This will help to leverage the biofuel industry even more, since high oil prices would boost investments in finding alternate resources and stimulate government policy of blending biofuels into gasoline thus resulting in economic and environmental benefits.

Lower interest rates in Europe are driving enormous flow of resources to emerging economies which are suffering with the valuation of their currencies, eroding their competitiveness. Also, some expected reforms are not progressing in important food/agribusiness producing countries resulting in increase in costs of several commodities.

*First published in *China Daily* (March 31, 2012).

Developing countries' tax management policies are confusing with newer protections and market access limitations. We face increasing risks of interference (regulation), some examples being the limitations exercised in food advertisements to kids and regulation toward foreign investments in land. In developed economies, we see shorter federal budgets as an argument to remove support for some less efficient agribusiness industries and even farmer support programs.

The ***economic and natural*** environment shows that in this decade, economic growth would probably be coming mostly from emerging countries (it was expected that in 2012, 5.5% average of GDP growth would be achieved by developing economies compared to 1.5% growth in developed economies) due to larger pace of income distribution in populated emerging economies.

Exchange rate policies are being used often thus affecting competitiveness of regions. Flow of capital and investment in food and agriculture brings a new environment of capital availability and increasing risks.

Since there is an increasing influence of weather in some regions, we see a shift in the production regions. Such shifts are also influenced by land prices and labor. New agricultural frontiers are being developed by local and international companies following governmental incentives for value capturing in producing regions (more processing than others). Also, in the economic environment, bigger environmental pressure will increase production costs and we see more initiatives of buyers increasing coordination over suppliers (farmers).

The ***socio-cultural*** environment shows some interesting changes. Migration and urbanization are leveraging the growth of processed food, the protest and mobilization movements are increasing pressure over inclusion, thus signalizing to the companies that such trends could be an opportunity within the supply chain. The companies face growing risks from consumer movements. The demographic trends of reduction on family size and people living alone continue to boost food service and ready to eat markets. There is also an increasing concern about food waste, and we see growing debates in this field.

Consumers are also demanding more information — whether the production treats its suppliers, i.e., farmers with fairness, consumers prefer to encourage direct trade and value what is "local." Natural and health-linked food movements continue strong thus creating an awareness and increase in the demand for certifications of products, companies and food chains. Finally, there is a larger acceptance of biotechnology, with focus over genetically modified products.

Another important point is an increasing pressure thrust by society and buyers against protection of some industries. For example, several sugar buyers in the US are protesting against high import taxes and other support programs for local sugar industry that have led to higher costs than international markets.

Finally, as we enter the era of commodities, there is an increasing pressure over natural resources within the ***technological*** environment. A lot of investments are taking place in the development of biotechnology and nanotechnologies, and in the

Table 1.1.

Facts and impacts to business	
List of facts	How they impact our business?

Source: Author

communication side, we can see the rapid transformation of society with digital world and new media improving the speed of communication. Availability and speed of information is facilitating in identify product sources and other relevant information quickly. Technologies that allow to recycle and reuse have higher value than before.

This chapter highlights some of the changes that emerged from recent discussions with business managers and executives. These are facts that will bring specific impacts to the industries and food chain participants that are desiring newer strategies, or improvements in their planning processes, respectively.

Discussion question

How will all these facts impact your business?

Chapter 2

Let Us Ensure the Seven Billionth Inhabitant Is Well Fed*

Much ink has been spent on warning us about the future of the planet, scarcity of resources, difficulties in the continuance of present-day lifestyles and consumption, availability of food and land, increased carbon prices and inflation, shortage of water, increase in obesity and other issues that have made us a lot more sensitive to the fundamental changes taking place around us.

What drove this blanket media coverage was the arrival of person number 7,000,000,000 on the planet. By the time you pick up the next issue of the *China Daily European Weekly* seven days from now, the world will have more than 1.5 million new mouths to feed.

Just to illustrate the scenario, global consumption of wheat is growing (three years average) at 10 million tons a year, corn almost 30 million tons a year and soya 20 million tons a year. The consumption of meat grew almost 20% in nine years. In essence, we have access to food but production is not responding the way it should. Last year alone we had a deficit of 50 million tons of grain.

Asia is creating a huge middle-class income population, with a possibility of almost 1 billion people in the middle class segment. All projections done 10 years ago on production, exports and imports in China are found incomplete, and some are plain wrong. In 1995, China produced and consumed 14 million tons of soybeans. Last year it produced 14 million tons and imported 70 million tons, and these figures exceed what has been projected for 2030!

If China wants to be self-sufficient in soybeans today, over 35 million new ha need to be dedicated to the crop. But this is unnecessary, since there are countries and regions in the world full of areas to supply food to China.

All this will become even more complicated in the coming years, due to the five-year strategic plan of China that focuses on income distribution and better working

*First published in *China Daily* (November 4, 2011).

wages. Thus, we can expect more income for poor people being reflected immediately in higher food consumption.

It is not only in China that food markets are growing at incredible rates. The food market in India is expected to grow from $155 billion (112 billion euros) in 2010 to $260 billion in 2015. In the same period, Thailand's food market is expected to grow 50% and Indonesia's from $65 billion to $100 billion. Imagine what could happen in Middle East and Northern African countries, in Africa as a whole and in South America, with the booming economies of Brazil and Argentina representing almost 250 million people.

Food commodities prices rose almost 40% last year. This increase is bringing back inflation, hunger and political disturbances in some developing countries, where people spend between 30% and 50%, and sometimes more, of their incomes on food and are net importers of oil.

Two basic questions need to be answered. The first is: Why do commodity prices keep rising and the price of industrialized products keep falling?

Several factors are putting pressure on food commodities markets, some of which are: the big increase in income and distribution in emerging economies (with no accurate consumption data); urbanization; changing consumption habits; emerging countries' government family income support programs; high oil prices and the use of grains and agricultural land for biofuels; food production shortages (due to climate, unsustainable water use, plagues and diseases, cost increases and other factors); the devaluation of the US dollar and investment funds speculation. Two of these factors need to be looked at more closely.

An increasing number of industries are using farmland more intensively as the main source for their products. Farms (agricultural lands) were originally "designed" for food production and now they are being occupied to produce fuels for our cars, to feed animals (habits are changing to eating more protein), for generating biofuels and biomass (electricity), bioplastics, paper and pulp. Agricultural land is also diverted for manufacuturing purposes as in pharmaceuticals, beauty products (cosmetics), clothes (cotton), shoes, leather, tires and other rubber products, construction and furniture and so on. Since land does not grow, the pressure mounts on existing land and as a consequence land prices increase dramatically.

The second question relates to the increase in cost for producing commodities. Traditional commodity suppliers are facing huge changes in cost structures, increase in prices of land, labor, water, fertilizers and crop protection. It is a fundamental change.

For example, a glass of orange juice offered at the G20 meeting in Cannes no doubt came from Brazil (about 90% of world market share). This juice is produced from oranges planted in São Paulo state, crushed in modern factories and moved in dedicated trucks and vessels using world-class logistics to Rotterdam. The cost of all this production and operation per ton of juice delivered in Rotterdam was $500 in 2003. Seven years later, the operational cost is about $1,500.

It is an incredible increase, and if consumers want to keep this chain alive, they will have to accept new price levels. These are the facts, but there are solutions.

How can the G20 countries work together to address the food supply and security issues in the coming decades toward 2030?

Food chains and governments have two ways of solving the future problems related to food demand. One is retreating to an increase in protectionism, stimulating noncompetitive areas to produce in an "economically artificial environment" and resuming war-time policies of "self-sufficiency." The other is a production shock, moving toward growth, global trade and inclusion.

Since 2008, I have recommended 10 solutions (Figure 2.1) to address food supply and security issues for the era of "doing more with less":

We would need to place more emphasis on technology, we need better land use and management, plant and animal production technology, waste management, diffusion and knowledge transfer, storage and movement of infrastructure and creative research and innovation in governance architecture.

Figure 2.1 10 Points — Doing more with less.

Source: Author.

It is now time to redesign food chains. It needs to be understood that the food system has changed and merged into a much more sophisticated system, taking in commodity companies and consumer companies alike. Food represents culture, economic development and a new integrated partnership system. There is a thin line between private companies, public companies and NGOs, and this conversion is making people sit and work together to avoid conflicts of interest.

Farmers worldwide, but mostly in emerging nations and Africa, need price incentives, technology, credit and buying contracts (market access) to invest and grow production to a level that can meet the increasing food demand in the next 10 to 20 years and solve the food crisis.

If the United Nations, FAO and G20 are worried about food prices, they would need to convince governments to debate their tax systems urgently, even to the extent of giving lower-income people temporary government support, all the while moving as fast as possible toward implementing the 10 points outlined above.

Food production will need to double in 10 years, and the world has the land, technology, water and farmers (people) to achieve it. Food chains should move in the right direction: there should be incentives for achieving sustainable growth in global farm production and trade that would generate welfare, inclusion and peace.

To produce more food with sustainability, there is a lot to do, and I trust it can be done. So let's welcome our 7 billionth kid.

Discussion question

What are the major opportunities that arise for your company from the discussions of this chapter?

Chapter 4

Effects of Exchange Rates in Food Trade*

The objective of this analysis is to share the possible impact of exchange rate movements in international food and agribusiness trade. The case to illustrate such impact will be Brazil, where its currency the Real (R$) faced huge variations since it was created and is recently going through a devaluation, thus impacting one of the world's largest food exporters.

The article is organized in three sections. The first will talk about the historical background of exchange rates and their impact on food chains. The second section is about the new exchange rate in Brazil and what could be expected from such a change. The third section is related to possible internal consequences of the lower value of the Real and how can the Brazilian Government control these problems.

Traveling to the past, the Real was launched in 1994 as part of the economic plan to stabilize the economy and enhance the institutional progress of the country. This currency is interesting to study since the trade value (exchange rate) towards the US$ varied in the last 18 years from US$1 to R$0.85 at early beginning, to R$3.8 than to R$3.2 and R$1.55 in July 2011. The Real, in 2011, was one of the most valued currencies in the world.

This *strength of the currency* was a consequence of, among other factors, the stabilization of the economy, political stability, improvement of its institutions and exports of basic nonfood commodities. The large amount of international investments in Brazil and higher international prices of food and commodities made annual exports of Brazil jump from US$20 billion in 2000 to US$100 billion in 2012. A silent revolution in food exports and corresponding fast growing world demand for food made an inflow of US$ into the country.

The overvalued Real brought an explosion of imports to Brazil, such as cars, electronic equipment, wines and other products from several sources. By end-2011,

* First published in *China Daily* (May 24, 2012).

almost 22% of the products consumed in the country were imported. This brought intense and new competition for companies operating in the internal market, but benefiting consumers at supermarkets with access to worldwide products, although more expensive than, for instance, when purchased in the US.

The overvalued currency also allowed two other movements: imports of equipment (capital goods) and machinery that improved competitiveness and enabled Brazilian companies to invest abroad opening new marketing channels. Several food companies expanded operations outside Brazil, taking advantage of the strong local currency.

Some negative impacts were seen in tourism with reduced international tourists (Brazil was very expensive) and the explosion in outward traveling and expenses of Brazilians. Most products, except the food commodities, had very tight and even negative margins in exporting activities and gradually companies reduced their exports. This happened in shoes, textiles, some processed foods, flowers, fruits and others.

The fact is that the Real went from US$1/R$1.55 to US$1.0/R$2.0. This is an important movement that can recover some margins and stimulate exports again, and as a consequence, more production, productivity, scale gains, efficiency gains and expansion in offering locally manufactured products in international markets. Sectors of more processed food that are cost intensive may now reach positive margins to export.

This new exchange rate will help to compensate food production costs increases due to poor logistics, more expensive labor (disputed by other sectors of the economy, like construction), strict environmental restrictions, higher land costs, higher energy costs, higher taxes that prejudice margins when producing in Brazil.

Finally, the most dangerous effect in all countries that face this situation is the risk of inflation returning, with terrible consequences, mostly for poor people. We have seen this in several neighboring countries of Brazil where imported products become more expensive, more products are exported and other factors contribute to the rise of inflation.

There are several ways for the government to mitigate this risk. Since the government may receive more income in taxes due to higher exports pulling more internal production, lowering taxes and also reducing nonessential governmental expenses may contribute to reducing prices in the internal market. The speed at which interest rates have fallen in Brazil may gradually reduce. A situation of a relative crisis in parts of the world make Brazil a target for international companies to market their products at reasonable prices that may help controlling prices. If we were in an era of excess of world demand, this would not impact positively. Finally, in some markets where prices were raised internally due to the exchange rate, the government may reduce import taxes.

In this chapter, by using the case of a large food exporter, Brazil, we have seen the impact in food chains when the exchange rate changes. For food importing

countries, most of the impact from devaluation of the Real are positive, since Brazil will be stimulated to export more, and will be more competitive in these exports due to all the investments described above. So for China, one of the biggest food importers from Brazil, these are good news, making even possible to expand the diversity of food imported.

Discussion question

Using this framework of the various effects of exchange rates variations, would an exchange rate movement affect your company? If yes, what preventive measures could be taken?

Chapter 5

From Farms to... Everything*

This chapter provides an interesting glimpse into the current state of our farms and farmers. From a traditional perspective of a farm producing food, recent technology innovations and other advancements are enabling farms to be multiproduct and service suppliers. At least 13 industries increasingly source their raw materials from farms:

1. **Food and Beverages:** to produce human food, including grains, fruits, eggs, vegetables, juices, milk, beef, fibers and others to an increasing and richer population demanding quantity, quality, procedures, conservation, environment, animal welfare and others.
2. **Feed:** food for the animal's growth and development, involving nutrition of larger animals, for pets and others.
3. **Fuel:** biofuels blending programs, which means fuel coming from the farm using corn, wheat, sugar cane, sugar beet, grasses, residues and other sources.
4. **Pharma-Medicine:** the growing end-use called "nutra-ceuticals" which means food products together with medicine, it involves producing products that have health benefits, like juice with calcium, lycopene, vitamins, proteins, omegas, and several other merged products.
5. **Pharma-Cosmetics:** products from food/farms that have benefits in terms of beauty, skin, tanning, and other characteristics desired by consumers ("nutri-cosmetics").
6. **Electricity:** farm products used as a renewable source of electricity, burning biomass in boilers and generating heat that is transformed into electricity, sold to the power network.
7. **Plastics:** replacing plastic coming from oil with renewable plastic coming from green and farm materials, like plant based bottles coming from cane or corn.

---

*First published in *China Daily* (January 13, 2011).

8. **Environment:** farms are being used in the battle against global warming, recovering forests, creek surroundings, rivers, and even benefiting from participation in carbon credit markets.
9. **Entertainment/Tourism:** use of farms and rural lands for tourism, weekend rest for urban families, festivals, educational purposes with kids in schools, hunting and similar recreational services.
10. **Textiles and Clothing:** natural fibers used to produce textiles and clothes for the fashion industry, like cotton and others.
11. **Shoe and Leather:** leather comes from cattle and other animals.
12. **Construction and Furniture:** wood from planted farms using eucalyptus, compensated woods and other sources.
13. **Paper and Packing:** materials come from processed farmed wood, producing a pulp that is transformed into paper products.

I have covered here 13 industries (see Figure 5.1) whose products come from farmers and consequently benefit from their existence. Surprising!

So the inherent message is: let's respect our farmers, let's give more value to our farmers. They play a much more important role in our day-to-day urban lives than we can imagine.

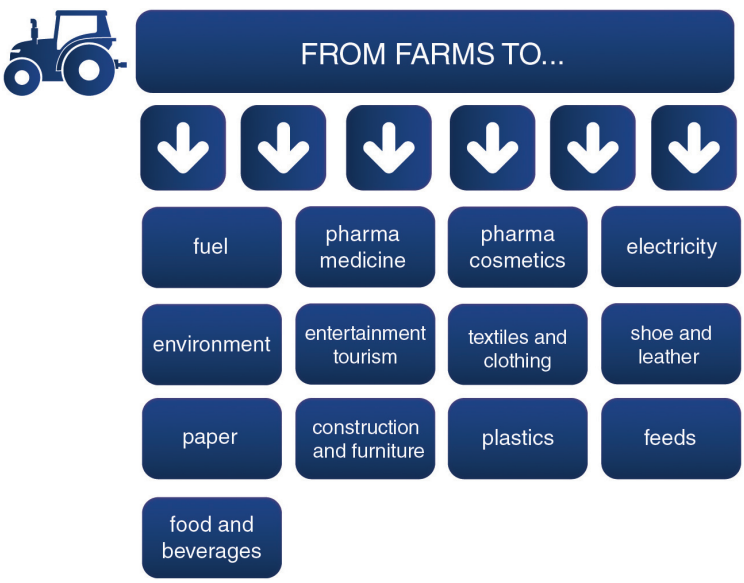


Figure 5.1 13 Points — From farms to... everything.

Source: Author.

Discussion question

Which new industries will benefit or use farms in the future?

Chapter 6

Navigating the Global Food System*

The International Food and Agribusiness Management Association (IFAMA) is an association of academics and industry established in 1990 as a forum that meets annually to discuss the future of food and agribusiness. In June 2010, the 20th Conference of IFAMA (www.ifama.org) was held in Boston. Bringing together around 300 food and agribusiness experts and managers from around the world, the major discussions were about the global food systems in a new era, and companies such as Sysco, Coca Cola, Los Grobo, Novus, British Foods, Fonterra, Alltech, COFCO, Rabobank and GlobalGAP had the opportunity to share their positions.

One of the most important topics discussed was the macro-environmental trend toward an increase in food consumption. Asia is creating a huge middle-class income population, with the possibility of almost one billion people moving toward the middle class. All the projections made 10 years ago in terms of production, exports and imports for China/Asia are found to be incomplete, and some, very inaccurate. Soybean imports today are far above what was projected for 2030. When asked about this subject, a COFCO/China executive and presenter refused to give a projection even for 2020.

Rabobank predicts 109% growth in food consumption 10 years from now. If China wants to be self-sufficient in soybeans today, over 35 million new ha should be dedicated to soybeans. But where is the land? Importing soybeans into China, in fact, amounts to importing fresh water. Overexploitation of water resources is already creating problems in China and India. Half the world's population is located in less than a third of the arable land, and this means a large food trade in the future. We need bigger ships, bigger ports and more efficient logistics and transport systems.

*First published in *China Daily* (June 25, 2010).

The dilemma of having to use the same land to produce food, fiber, feed and fuel was also discussed. In a global perspective, around 10% of grains in the world go to fuel (biodiesel), 35% of the corn produced in the US goes to ethanol production and 50% of Brazilian sugarcane is used for fuel.

The good point about this is that there is capacity in agriculture to react toward food consumption and biofuels. In the last 40 years, food production has doubled and can double again, since farming is definitely becoming global, with an ever faster daily movement of buying land in the most cost-efficient producing countries. For Olam, based in Singapore and one of the most important sourcing and trading companies nowadays, supply chain arbitrages to produce cheaper and better is the way forward, so they invest toward supply in several countries using this philosophy.

The example of CHS Inc. (a large cooperative in the US) was discussed and is a lesson to other cooperatives across the world. Why? Simply because CHS Inc. is not attached to US land anymore, and is producing in Brazil, Eastern Europe and looking for other areas for expansion globally in the next 10 years. Farmers and cooperatives will be global, and South America is considered, before Africa, to be the next food frontier to be conquered, although it lacks investment in logistics.

The definition of agribusiness in 1955 was quite simple, since in the past most societies were 90% dedicated to agriculture. Redefining it nowadays is much more difficult as the food system has changed and merged to become a much more sophisticated system, from commodity companies to consumer companies. Food represents culture, economic development and a new integrated partnership system. Health insurance companies are working together with food companies, since food is the most important element of health.

There is a thin line between private companies, public companies and NGOs, and this is making people sit and work together to avoid conflict of interests. How do we know that what we are doing is good? To answer this question, third-party evaluators will become the fastest growing industry in the food business.

Those of us involved in education have to create managers who look at the totality of these decisions, since food production, health, nutrition, environment and climate control are not isolated public policy issues. We have to teach in a multidisciplinary way and not treat multifaceted problems as isolated. It is a new world of multidisciplinarity that we are navigating in, with very complex and fast moving waves of changes to be understood.

Discussion question

Can these messages help in formulating ideas for your company? If yes, please list them.

Chapter 7

The Roots of Food and Agribusiness Thinking*

January 2010 was a historical month for Harvard Business School, Boston. The traditional Cases Seminar completed 50 years of existence. Every year, around 200 executives from all continents join to discuss 12 case studies of companies that have something new for us to learn and spread this experience toward a more efficient and sustainable world.

The seminar has interesting dynamics. Each case is written up during the year by a team of Harvard professors and researchers. A traditional case has around 20 pages, with 10 pages of text and another 10 of annexes (financial and market data). The case reports the historical facts of each company, challenging times and decisions for the future, in terms of strategies.

In a case discussion event, like the Harvard Seminar, each participant has access to the HBS website to download the cases, materials and instructions and has to read the case in advance. At the seminar, each case is initially discussed with a small group of eight participants, to facilitate a more interactive opinion-building process. Then, the case is discussed at a plenary meeting, and finally, the CEO of the company answers questions and interacts with the audience. It is four-day event in which all participants are fully engaged. It is very difficult to take part in the event if the participants don't read the cases in advance, almost impossible.

Harvard is where the term "agribusiness" was first elaborated, in 1955. The concept was an attempt to bring more integration, considering agriculture as an activity strongly linked with suppliers of inputs, service providers, the processing industry, distribution systems, financial institutions and consumers. Later, in 1968, a new publication emerged. This book introduced the concept of "agribusiness systems." The difference here is that an agribusiness system considers the flow of one product

* First published in *China Daily* (January 26, 2010).

over an interactive system or food chain. The sum of all the systems operating in a particular country results in the country's agribusiness.

In the 2010 Seminar, 12 cases were discussed. There is already a tradition of having a case from China and inviting at least 10 executives from China to participate. In 2009, the COFCO case was written, presented and discussed. In 2010, the DaChan Food Company was in the spotlight. From DaChan we had a description of the company, its origins and its operations in feed and meat, how the company contracts farmers in an integrated system of producers, and the most important point was how DaChan developed a reliable system of transparency and traceability to guarantee quality for its buyers. DaChan has conquered an important position as a major supplier for international foodservice chains operating in Asia.

The other cases involved Cosan, which is Brazil's largest ethanol company, and its recent growth strategies. This case discussed the outstanding results that Brazil is achieving with ethanol. Monsanto was also a case, exploring the position of this company in innovation, acquiring seed companies as "transporters of technology" to farmers, and changing communication strategies, toward new trends of farmers. The innovation pipeline was discussed and we can expect more plants resistant to water scarcity in the future. The Woolf case explored the production of horticulture and almonds in California, and how water restrictions are threatening future production.

Rabobank, the largest cooperative bank, based in the Netherlands, was also explored, with its unique characteristics and the future growth strategies, with a focus on food and agribusiness systems. We also had Purecircle, which explored the market of stevia-based sugar, a natural sweetener; Ebro Puleva, the world's largest rice company, based in Spain, and Hungerit, which explored poultry production in Hungary, before and after the communist era.

Interesting experiences also came from GTC Biotherapeutics, a company dedicated to produce medicine and food, providing ingredients, proteins and other medicines from food and animals. Red Tomato was also a case, and this company is dedicated to linking local food producers to supermarkets.

Another intriguing case was Diamond Foods, which started as a farmers' cooperative and is now the leading company in the almond snacks market in the US, with farmers as shareholders of the company. A final case, Codevasf, was written by us. This is a public company in Brazil that is lending 8,000 ha of irrigated land to the private sector in a very interesting bid considering sustainable integration.

Discussion question

Which examples could be extracted from these companies for application in our company?

Chapter 9

The World of Retailers Brands*

Private labels (brands developed and managed by distributors, retailers and wholesalers) are currently one of the most discussed issues of strategy and have a major impact on the retailers' activities. They are an important tool for the distributor in a very competitive sector and have played different roles in the food industry, ranging from threats to opportunities. The objective of this chapter is to select some important aspects to be considered in relation to supplying food products to be included in a retail or wholesale distributor's private label.

In some countries, the share of private labels at retail has reached over 50% of total food sales. Some retailers even sell only their brands in the stores. The percentage of private label sales within product categories is higher in food and beverages than in other product categories.

What are the possible advantages for a food producer when he decides to sell products to private labels?

I think there are several possible advantages: since communication is carried out by the retailer, lower cost for the company is a first one. There is also a possibility of increasing sales and obtaining scale gains, since the company will have higher occupation of the factory capacity and volume of inputs bought, increasing their power to negotiate with suppliers. The producer can occupy a larger space on the retailers' shelves (this happens when there are two brands from the same factory — the original and the private label).

For a food producer, it could also be easier to obtain credit and funding from banks, since future sales are guaranteed by the supply contract. In product line decisions, it gives the possibility of alternative product lines with different prices and positioning. It is important to note that normally these products do not have

*First published in *China Daily* (April 20, 2010).

or have few technological innovations. Very few new products are launched as private labels. There is improvement in the relationship with the retailer. An advantage for the food company is the reputation of the retailer, since consumers recognize that being a supplier to a retailer acts as a quality certification. It may also add a possible lower physical distribution cost, and food producers do not need promoters at the point of sale.

Another point that should be considered is that the company may face a possible lower market share for the main company's brand at the store, but a higher market share for the factory (since now it has two brands coming from the factory to the shelves). The company gains experience, and further can supply other retailers, even other industries and, as the retailing sector becomes more global, there is the opportunity to be the global supplier in the category. A final and practical reason to study this proposal is that if one company does not occupy this space, there is another competitor waiting to claim it.

For the retailer: What are advantages of having products with their brands?

First, we need to understand that there are several possible formats: a brand with the name of the retail chain; a retail brand, but with another name and retailer stamp on the product, etc. There is an advantage in vertical chain coordination, having production without production assets and to have possible stock reductions since these products will be managed by the retailer. The retailer also gets higher bargaining power to negotiate with other suppliers, given the flexibility of private labels' price positioning. This strategy adds the possibility of developing store loyalty (identification in the mind of consumers whenever they see the brand at home or in other places). Private labels normally offer higher margins and lead to shelf-space disputes: once one part of the limited space is filled with its own products, it reduces space for other companies to share.

Another possible advantage is that the store's product line gets wider. But the retailer has to coordinate very well and ensure careful quality monitoring because the brand image (the name of the retailer) can be damaged if there are problems.

Since retailers are recognized and in some cases highly admired by consumers, why not extend their brands to the products sold in the stores? Private labels today are of major concern in marketing. How can the food industry fight against these giants? Private labels have increased the competition in the food market and enhanced retailers' bargaining power. Market leaders are threatened by increasing private label sales even within premium segments, and on the other hand, the second or third brands in the market are threatened by cheaper private labels (see Table 9.1).

Table 9.1

A Framework of Possible Advantages for Food Producers and Retailers in Relation to Private Labels

POSSIBLE ADVANTAGES FOR THE FOOD PRODUCER TO ESTABLISH THIS RELATIONSHIP
➔ Communication is done by the retailer: possibility of lower communication (advertising/product promotion) costs for industry;
➔ Possibility to increase sales and obtain scale gains: higher occupation of factory capacity and improvement at the inputs buying volume, enhancing negotiation power with suppliers;
➔ A larger space occupied on the retailer shelves (this happens when there are two brands from the same factory – the original company brand and the private label);
➔ Possible liberation of products sold on consignment (a request usually made to the food industry by retailers);
➔ Could be easier to obtain credit and funding by banks, since future sales are guaranteed by the private label supply contract;
➔ Product mix: possibilities of alternative product lines with different prices and positioning;
➔ Normally these are products without technological innovation. Hardly any new products are launched as private labels;
➔ Possible improvement in the relationship with the retailer, receiving better shelf-space, without paying slotting allowances and other retailer taxes;
➔ Consumers and distributors recognize the company quality (being that particular retailer's supplier of the private label brand works as a quality certification);
➔ A possible lower physical distribution cost;
➔ Promoters are not needed at the point of sale;
➔ A possible lower market share for the main company's brand at the store, but a higher market share for the factory (since now it has two brands coming from the factory at the shelves).
➔ The industry gets experience and further can supply other retailers, even other industries.
➔ As the retailing sector becomes more global, there is the opportunity to be the global supplier for the category.
➔ A final and practical reason to study this proposal is that if one industry does not occupy this space, a competitor will occupy it;

Table 9.1 (*Continued*)

POSSIBLE ADVANTAGES FOR THE RETAILER TO ESTABLISH THIS RELATIONSHIP
➔ First we need to understand several current formats: brands with the name of the retail chain; retail brands, but with another name and retailer stamp on the product. ➔ Each one will show advantages and disadvantages that will not be discussed here; Vertical chain coordination allows production without production assets; ➔ Possible stock reductions since these products will be managed by the industry; ➔ Higher bargaining power to negotiate with other suppliers, given by the flexibility of the private label's price positioning; ➔ Possibility of developing store loyalty (identification in the mind of consumers once they always see the brand at home or in other places); ➔ Possible higher margins; ➔ Increase in pressure for shelf-space disputes, once one part of the limited space is filled with its own products it reduces space for other companies to share; ➔ Store's product line gets wider; ➔ It needs careful quality monitoring because the brand image (the name of the retailer) can be damaged if there are problems;

Source: Author

Discussion question

Apply "Private Labels Framework — PLF" to a specific offer of your company to exercise possible benefits and risks.

Chapter 10

Retailers: The Giants of Chains*

Retailers' numbers of 2010 are impressive. Walmart, the leader, had a whopping 337 billion Euro sales in 15 countries and 8400 stores. Carrefour is the second, with 115 billion Euro sales in 35 countries. The next is Tesco, far behind with 78 billion Euros. Although these numbers are absolutely impressive, since they are even bigger than the GDP of some countries, the concentration of retail has decreased. In 2003, the top 20 retailers had 23.4% of market share, and in 2010 they have around 21% of total sales in the world. What is the reason behind these extraordinary sales?

One explanation is that when comparing the size of retail markets in several countries, the changes are huge. In 2006, the sequence of the largest markets, with countries and billion Euro sales (in brackets) was as follows: US (612), China (328), Japan (297), France (206), India (190), UK (188), Germany (150), Italy (127), Russia (116) and Mexico (112) were the 10 biggest. Using recent numbers to project sales for 2014, the 10 largest markets are expected to be China (761), US (745), India (448), Japan (360), Russia (322), Brazil (284), France (228), UK (198), Germany (168) and Indonesia (167). The reader may note that BRIC countries will have four of the six largest markets. In these emerging countries, retail concentration is smaller, which is a possible explanation.

Given below are some points that I consider as part of an agenda for food retailers, the "giants," for our strategic thinking process (see Table 10.1).

1. To kickstart the thinking process, the subject — private or retailers labels will be discussed. This is definitely one of the most important factors. The penetration of private labels in the percentage of food sales is increasing, and in some chains, mostly in Germany, they may have 60% or 70% penetration. In Switzerland, 47% of market is conquered by private labels and in several other European countries they have more than 30% of market share. Brazil, India,

* First published in *China Daily* (October 7, 2010).

China and Russia still have less than 10% of private labels share, so we may expect several changes and impacts in the future.

2. Another point, probably linked to the decline in the concentration ratio of retailers is the trend toward the neighborhood concept, with bigger proximity and convenience. Retailers have a multi-format development: hypermarkets, supermarket, membership clubs, convenience and discount stores. But neighborhood stores are increasing toward consumer's trends of buying less and more frequently, closer to home.
3. Information and communications with consumers: Retailers dominate with two valuable assets in their possession: information about consumers (what, who, when, why they buy) and space for interactions and selling. Retailers are selling this information to food companies and will offer more space to food industry to enable such communications inside the stores, representing an increasing source of income. For the industry, since almost 70% of the buying decisions are taken at the point of sales, this strategy represents an opportunity to win the battle over the shopper's preference.
4. Retailers also face new challenges with operations management. These include the permanent reduction of transactions costs, smaller number of suppliers (without increasing dependency) and technology (electronic data interchange systems). This also means better product assortment to maximize shelf space.
5. Services toward convenience are also a trend in the competitive arena for some retailers. Such services include delivery, packaging gifts, offering ready to eat meals (home meal replacement), bakery, butchery, coffee shops and others.
6. There is also a trend toward "green movement" such as saving energy and measuring carbon emissions (these are identified as environment friendly).
7. Some retailers are adopting a strategy of sustainable initiatives of sourcing, using fair trade concepts and others toward an increase in the inclusion of small holders as suppliers, even increasing their transaction costs with this action.
8. Internationalization and global sourcing continues to be a trend and retailers faces the challenges of different cultures. But this also allows retailers to find the best suppliers from all over the globe and bring their products to all stores that source globally.
9. Retailers are also facing stronger competition from different formats like direct sales, online sales, door-to-door distribution systems and an increasing share of consumer expenditure on food service (restaurants, caterers and other formats).
10. Last but not least is a trend toward collective operations withother retailers, sharing and buying structures and centers, stock management, marketing, layout, technology, which maybe a first step toward future mergers of giants in the food industry.

These are the 10 topics of discussions at present, involving the giants of the food chain.

Table 10.1

Agenda for Food Retailers - The Giants.

	Questions	List ideas and opportunities for a company
Private or retailers labels	What changes and impacts in the future can we expect of private labels and retailers?	
Trend toward neighborhood concept	Why is the number of neighborhood stores increasing? What to do to attend to consumer's trends?	
Information and communications	What to do to get the information from retailers? What strategies to use to gain the customer's preference? What kind of communication to use in a point of sale?	
Challenges toward operations management	What to do to reduce transaction costs? What to do to maximize shelf space?	
Services toward convenience	How to offer convenience services?	
"Green movement"	How to save energy and measure carbon emissions?	
Strategy of sustainable initiatives of sourcing	How to include small holders as suppliers?	
Internationalization and global sourcing	How to facing the challenges of cultural differences? How to identify the best from all over the globe?	
Competition from very different formats	How to face competition from different formats?	
Trend toward collective operations	How do collective operations with other retailers?	

Source: Author

Discussion question

It may be useful here to discuss these topics more deeply, specifically issues about the opportunities and their impact toward food chain participants and to your specific company.

Chapter 11

The Evolving Role of Trading Companies in Food Chains*

This chapter aims to discuss the major changes happening in trading companies (here, I will use the acronym TCos) that operate in food and agribusiness chains. The idea here is to raise the facts that are changing, the impacts brought by these facts and leave an open discussion toward which acts should companies that are performing business with TCos adopt. These ideas are based on discussions with leading trading companies and agribusiness specialists. Examples of TCos are Bunge, Cargill, ADM, LDC and others.

A TCo performs several functions in agribusiness markets, but the most important function is performing trade — finding sellers of crops (or what we call sourcing), and sort out the buyers. Different from a broker that operates via a commission, a TCo buys and sells products.

Most of these companies also went backwards (vertical integration) and got involved in processing (industrial phase). They also play an important role in logistics and in financing agribusiness in some markets. Some of the key characteristics of TCos include their access to capital, owning large scale units, fleets of vessels, world-class selling teams etc.

Within the food chain, from agricultural supplies to the final consumer, TCos operate in several ways. Some are more focused at the initial parts of the chain and others move forwards, toward final consumption via branded products.

Several facts are impacting the world of TCos. As new entrants operate in the growing food business, we have a tougher competition in commodities, mostly in grain origination. Thus, some companies are expanding operations through the value chain and others are reinforcing their positions in the trading and/or input business.

*First published in *China Daily* (March 18, 2013).

Globally, Which Facts Are Influencing the Strategies of TCos?

- Due to increase in consumption, the food trading business is growing rapidly in all parts of the world.
- The world is facing a mid-term challenge of insufficient grains and other commodities origination.
- Concentration of TCos via mergers and acquisitions.
- Increase in transport costs and pressure over logistic resources.
- Rapid rate of internationalization of TCos would enable global operations and sourcing mostly would become bigger. Internatinalization would also help reap advantages of different production cycles of the products in different regions of the world, making possible better usage of logistical and management assets.
- There are new entrants in the traditional TCos' market, like buying groups, selling groups, farmers, cooperatives, crop input dealers and other agro-industry dealers.
- Access to information, one of the key competitive advantages of TCos is now available at a global level via web and other sources at a cheaper cost.
- At the same time that TCos face a growing market, it also faces increasing complexity in governmental regulations (import taxes, export taxes).
- Some Governments are transferring logistic infrastructure to private sector thus creating important challenges and opportunities for TCos.
- Consumer demands towards traceability, safety, security and certifications create more difficulties for the TCos traditional business forms.
- NGOs are putting increasing pressure over TCos operations.
- TCos core business remains grain origination, but to increase this capacity, TCos must offer a complete package of products, like seeds, fertilizers, crop protection and other services to farmers.
- Financial services provide important competitive advantage in markets that lack credit.
- Some TCos are diversifying and moving backwards in the chain, increasing their operations as agri-input dealers offering complete solutions to farmers; with this strategy, they will represent a new marketing channel for crop protection companies but may also increase channel conflict.
- TCos are focusing in marketing products to the end consumer.
- TCos are increasing activities and mostly investments over ports and other logistic infrastructure that have being privatized.
- Some TCos are integrating operations with cooperatives, farmers and fertilizer companies trying to build a lock in strategy to secure grain origination.
- As other important food chain participants, TCos are increasing their demand driven behavior and building marketing activities with other partners.

- The integration of TCos and large farmers/cooperatives can stimulate the development of crop input generics and private label strategies.

We tend to, in order to simplify, characterize trading companies in three major segments (see Table 11.1).
Just to have an idea, the following picture shows some movements of TCos operating in the Brazilian market, so you can understand the complexity of it.
Finally, the tool of this chapter is presented. The major events happening in the world of TCos, the major impacts and what could be the acts for a company that deals with TCos are discussed (see Table 11.2).

Table 11.1

Traditional Tradings	Tradings Moving Upstream	Production / Input Distribution Oriented Companies
➔ Focus on grain and logistic operations ➔ Willing to be collaborative (exchange of information, etc.); ➔ Tend to establish partnerships with other companies in the chain (logistics, technical assistance etc); ➔ Non-exclusive relationship w/ chemical companies; ➔ Opportunities to capture value from dealers; ➔ Companies more likely to invest in input distribution; ➔ Companies more interested in partnerships;	➔ Apparently focusing on consumer brands and foods; ➔ Important companies with logistics; ➔ Need to originate grains for use and global operations; ➔ Tend to establish partnerships with other companies in the chain; ➔ Non-exclusive relationship with chemical companies;	➔ Companies from other business integrating or diversifying to trading operations; ➔ Do not have complete access to logistics and will need partnerships (inputs and structure); ➔ Need to develop new competences; ➔ Those that are producers, usually uses leasing and low investments in fixed assets;

Table 11.2

Facts What is happening	Impacts For Tradings	Acts What Should You Do?
➔ Due to increase in consumption, the food trading business is growing fast in all parts of the world; ➔ World is facing a mid term challenge of insufficient grain and other commodities origination; ➔ Concentration of TCo's via mergers and acquisitions; ➔ Increase in transport costs and pressure over logistic resources; ➔ Fast rate of internationalization of TCo's, global operations and sourcing mostly to become bigger and also to take advantage of the different production cycles of the products in different regions of the world, making possible better usage of logistical and management assets; ➔ New entrants in the traditional TCo's market, like buying groups, selling groups, farmers, Cooperatives, crop input dealers and other agroindustry; ➔ Access to information, one of the key competitive advantages of TCo's is now worldwide available via web and other sources; ➔ At the same time that TCo's face an increasing market, it also faces increasing complexity in Governmental regulations (import taxes, export taxes); ➔ Some Governments are transferring logistic infrastructure to private sector, creating important challenges and opportunities for TCo's; ➔ Consumer demands towards traceability, safety, security and certifications create more difficulties for the TCo's traditional business; ➔ NGO's increasing pressure over TCo's operation.	➔ TCo's core business remains grain origination, but to increase this capacity, TCo's offers to farmers a complete package of products, like seeds, fertilizers, crop protection and other services; ➔ Some TCo's are diversifying and moving backwards in the chain, increasing their operation as agri-input dealers offering complete solutions to farmers; ➔ With this strategy, they will represent a new marketing channel for crop protection companies but also may increase channel conflict; ➔ Other put their focus in final consumer marketing products; ➔ TCo's increasing activities over Ports and other logistic infrastructure that has being privatized; ➔ Some TCo's are integrating operations with coops, farmers and fertilizer companies trying to build a lock in strategy for grain origination; ➔ TCo's are trying to capture value from crop input distribution and also creating channel conflicts and price competition; ➔ As other important food chain participants, TCo's are increasing their demand driven behavior and building closer relationships also with marketing activities; ➔ Also the integration of TCo's and large farmers/coops can stimulate the development of crop input generics and private label strategies;	

Discussion question

Based on the changes discussed in this chapter, the question is how should a company dealing with, selling to or buying from TCos operate? Which strategies could be formulated? What are the major acts (projects) to adapt to this changing environment?

Chapter 12

The New World of Farmers*

This chapter aims to discuss the major changes happening in farming, mostly in the largest farming export countries as the US, Brazil, Argentina among others with relatively different environments like South Africa, India and China. The objective is to raise the facts that are changing, the impacts brought by these facts and leave an open discussion to help develop strategies that companies dealing with farmers should adopt. This chapter is based on discussions with farmers and researchers in four of these countries. Among these countries, probably Brazil is the one that most fits with these trends.

Some of the changing facts and trends are listed here (see also Table 12.1 for the framework).

- There is increasing price volatility in the world of agriculture.
- There are newer risks due to climatic change and governmental regulations.
- Access to technology is becoming critical as technological availability is increasing.
- There are more farms per farmer being managed thus increasing farming concentration.
- Much more information is now available, most of them for free.
- Changes are evident in farming production business models.
- Changes are also evident in farmers behavior, farmers are more professional and informed.
- Farmers are diversifying to other regions and activities, including livestock.
- Farmers are getting more capitalized, but still need credit due to price/cost volatility.
- There is an increase in capital needs and land usage restrictions.
- Urban opportunities for labor are growing.
- Farmers find resources scarce.

* First published in *China Daily* (March 14, 2013).

These changes in the farmers' environment would impact the food chains:

- Shift of bargaining power toward farmers.
- Farmers are creating increasingly bigger buying groups.
- There is a growing need to build scale as a basic principle.
- Costs of labor are increasing.
- More and more farmers are well informed and are gaining technical and market expertise.
- Increasing costs of adjustments to a more restrictive environmental institutions.
- The issue of good land management is now considered core to being successful.
- Multiple buying attributes demand different approaches to serve farmers with different profiles.
- Price and technical issues are becoming more important considering farmer's buying behavior.
- Information is readily available about suppliers of products and services and also prices of various offers and solutions.
- There are opportunities to develop new credit alternatives and support farmers' working capital needs;
- There is an increase in risk exposure and demand of capital due to the more sophisticated offers existing in the market.
- Use of technology will lead to incredible changes in the future, mostly linked to digital ("cloud") farming.

Based on research done by our team, at least four segments of farmers can be clearly characterized in emerging farming countries like Brazil.

Conventional Farmer (COF): Such farmers would own a farm of small to medium size, would prefer owner-driven management style to run their farms and usually would also own the machinery. They would prefer low chain integration and focus on agriculture, their major business. They were recognized as entrepreneurs in the past when they built their businesses. They are very traditional in their profile and tend to be older in age. Within the conventional farmer, we may add size of the farm and degree of technology usage.

Business-Oriented Agriculture (BOA): These are more medium and large farmers, from familiar to professional management, working mostly on own and leased land and equipment, having some chain integration in trading or acquisition functions, core business is within agriculture and commercialization is more present in nontraditional agricultural areas.

Network Managing Farmers (NMF): Normally large-scale operations, with a professional management, such farmers would own equipment and lease to other farmers. They are very integrated in terms of the network perspective, providing services to other farmers. They achieve economies of scale in inputs, bundling seeds, crop protection, fertilizers, logistics, credit and others. Also most of these companies

Table 12.1

Facts What is happening	Impacts For Your Company	Acts What Should You Do?
→ Increasing price volatility in the world of agriculture; → New risks due to climatic change and Governmental regulations; → Access to technology being more crucial and technological availability is increasing; → Increasing farming concentration (more farms per farmer being managed); → Much more information available, most of them for free; → Changes in farming production business models; → Changes on farmer's behavior, more professional and informed; → Farmer diversification to other regions and activities, including livestock; → Farmers are getting more capitalized, but still need credit due to price/cost volatility; → Increase of capital needs and land usage restrictions; → Urban opportunities for labor are growing; → Scarcity of resources needed by farmers to produce.	→ Shift of bargain power towards farmers; Farmers are creating increasingly bigger buying groups; → The need to build scale as a basic principle; → Increasing costs of labor; Well informed farmers, increasing in a yearly basis, the technical and market expertise; → Increasing costs of adjustments to a more restrictive environmental institutions; → The issue of good land management; → Multiple buying attributes demand different approaches to serve farmers with different profiles; → Price and technical issues are becoming more important considering farmer's buying behavior; → Information is more available about suppliers of products and services and also prices of the solutions; → Opportunities to develop new credit alternatives and support farmers' working capital needs; → Increase of risk exposure and demand of capital due to the offers existing.	

are becoming global farming companies, and they tend to base their expansion in long-term land leasing with lower investment in assets.

Farm Transformers and Builders (FTB): These companies or farmers are more common in agricultural frontiers. These companies are opening new areas, transforming land not used or used for pastures toward agriculture, are large-sized, professionally managed and really focusing in real state. So, they will wait for the value increase of the land and then make profits selling the land, probably to the network-managing farmers that go with the profile of land acquisition.

These are four clear segments that can be found in emerging countries' agriculture with focus on expansion of land. To understand these segments and profiles it is important to build linkages with farmers. One aspect is true: a company, to operate with farmers, must have the mindset of "thinking as a farmer" and behave more "grower-centric."

Discussion question

Based on the changes and trends discussed in this chapter, the questions are: What strategies or ideas should be evolved by a company dealing, selling to or buying from farmers? Which of these ideas could be useful? What should be the major acts or projects to adapt to this changing farming environment?

Chapter 13

The World of "Seed, Weed and Bug" Companies within Food Chains*

This chapter aims to discuss the major changes happening in crop input protection and seed companies in food chains, mostly in the largest farming countries (the US, Brazil, Argentina and others). They will be called CPS companies in this chapter.

The objective of this chapter is to raise the facts that are changing, the impacts brought by these facts and leave an open discussion about the acts or strategies that companies operating in the CPS business should perform. We have derived these facts and ideas from our discussions with input suppliers, dealers, cooperatives and researchers in these three cited countries.

A typical description of the network of these companies is shown in Figure 13.1 to understand their business environments.

When looking at the marketing channels of CPS companies, it is important to highlight dealers and cooperatives. Dealers' development, using the example of a large agricultural producing country (Brazil), can be summarized in four different phases.

Phase 1: In this phase, the industry began as a small, local and sales/technical support-oriented business;
Phase 2: Rapid growth was achieved along with a thrust to good governance practices;
Phase 3: This was a process of rapid consolidation, professionalization and expansion;

* First published in *China Daily* (March 21, 2013).

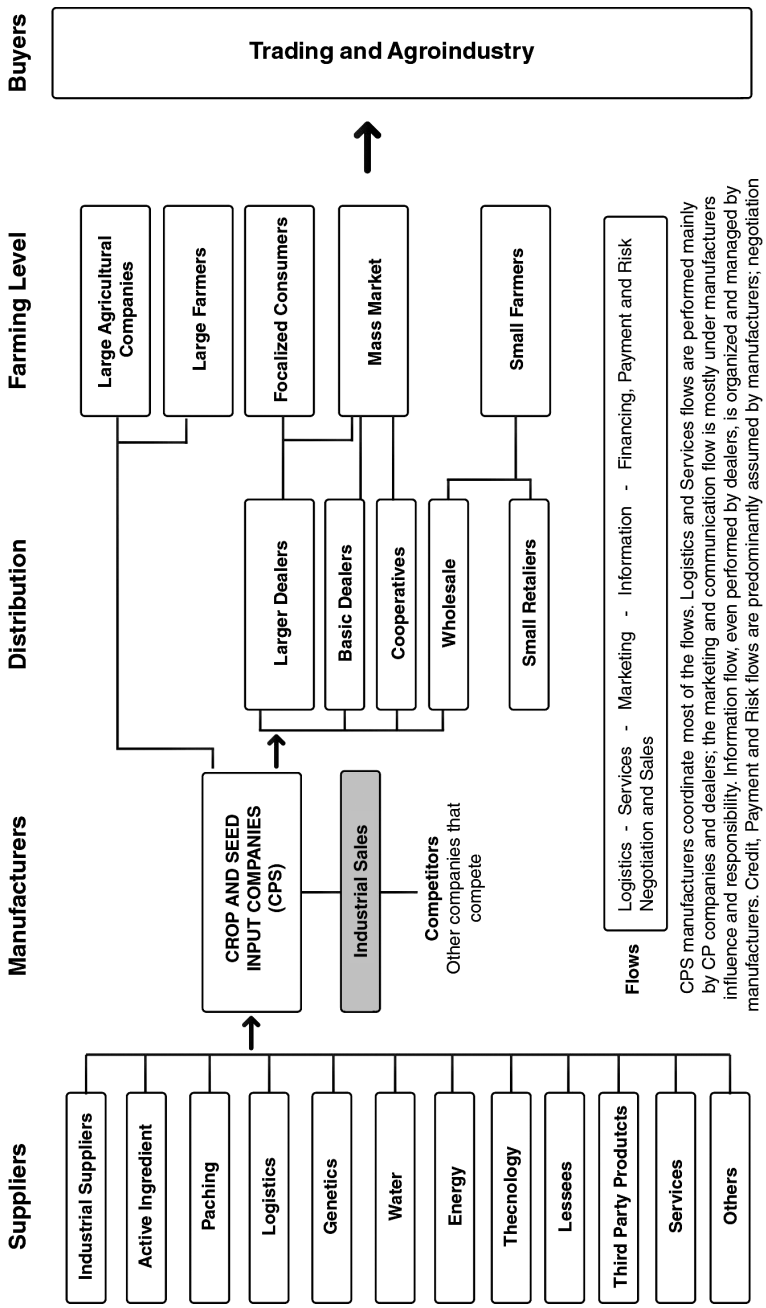


Figure 13.3 CPS BUSINESS NETWORK

Source: Author.

Phase 4: In this phase, there was shift toward business diversification with credit leverage, internationalization and promotion of some already existing capital companies. Representatives of these four stages can be found operating in the market, but we clearly see an evolution from 1 to 4.

Regarding cooperatives, we must know that these companies are becoming larger and emerging as key players in most food and feed production chains, investing in business diversification and regional expansion.

Cooperatives are also creating consortiums and publicly traded branded companies alone or via joint-ventures, integrating from inputs to trading in food production/distribution. In terms of strategic fit, we clearly see cooperatives adapting to farmers demands and focusing on cost reduction and extending services to farmers in regions where consolidation is not the path, access to cheaper farm inputs and logistical export capabilities in areas where farm consolidation is present.

Taking the example of a large supplier of food (Brazil), we want to address the major facts and trends witnessed in the booming market for CPS industries. By 2013, Brazil is already the largest world market for some of these companies.

Let us review the facts:

- Agriculture is growing, but would need to grow faster to feed the nine billion population, hence the market of CPS is growing and should grow continuously in the next decade mostly in emerging markets (South America, Africa, Asia and Eastern Europe).
- Demand for biotech seeds and specific traits grows within society, such traits mostly allow usage of lower volumes of herbicides, insecticides and fungicides.
- Several products are losing patents.
- Farm production development has in part been supported by cooperatives, partially substituting the insufficient amount of public credit systems. In markets where credit is abundant (the US, for instance) this doesn't happen.
- Barter (delivering CPS products to farmers and being paid with grains) has become an accepted market activity.
- Previously called only Crop Protection Companies (CPC), now we see the growing importance of seed businesses within these companies, with several acquisitions and developments.
- Farmers costs are increasing due to new diseases and plagues; the process of registering new products in some markets face a lot of restrictions from public agencies and NGOs.
- Increasing risk of regulations towards foliar applications and use of airplanes.
- The emergence of generic substitute crop protection products, coming from China or other countries.

- Fertilizers play an important role, the first time growers have a big demand of fertilizers when planning input purchases, however, this means huge amount of credit to farmers and dealers.
- Farmers concentration allows these to leverage financial resources from different sources.
- Large agricultural countries are internationalizing their CPS markets and welcoming new entrants into the industry.
- Dealers that were previously only in CPCs are now diversifying into seeds, fertilizers, services and trading businesses. Some are also strongly involved in farming.
- There is concentration on distribution with a smaller number of big dealers.
- Dealers are expanding to other regions as part of their growth strategy (regional diversification).
- A new movement of internationalization of distribution is taking place.
- Dealers face increased advantages of local presence and closer business relationships with farmers, even developing personal relationships.
- Dealers have access to better information and technology.
- Dealers are more flexible to adapt business models and processes than agri-input companies.
- Trading companies are entering the CPS distribution business in order to guarantee origination.
- Cooperatives are getting larger, more diversified and more vertically integrated in the food chain.
- Cooperatives are expanding to newer areas, some are doing so to compete with other cooperatives in their regions. Some of them are following their farmers, since they are expanding to other frontiers.
- Creation of a centralized cooperatives body, consortium and other alliances to buy together (fertilizers, services, CP, seeds) and even to import directly and export directly (trading) is being implemented.
- Cooperatives are increasingly much more professionally managed.

So what is the impact of the above changes on CPS companies?

These consolidated changes are impacting CPS companies within the food chains:

- Increasing rivalries among CP/Seed companies and generics are leading to disputes among people and related channels thus increasing costs.
- CPS companies tend to focus in traditional strategic pathways:
  (a) low cost (generic, low marketing and relationship, low innovation and copier of value capturing innovations); (b) lock in strategy (offering complete package of solutions and services, innovative, relationship builder, chain manager, and even localized adaptations) or (c) hi tech, focused in generating new technologies.

- Increasing importance of the distribution network to leverage business of agri-input companies and be closer to small and medium size farmers.
  To have a seed portfolio is a fundamental strategy of CPS companies to offer a complete package to farmers, since the seed market — mostly biotech — will have a faster growth rate, demanding innovative solutions. CPS companies are increasing the value of R&D dedicated to seeds and traits.
- Increasing importance of fertilizers and seeds has reduced CP participation on dealers' general business.
- Larger dealers increase difficulties in sustaining exclusive relationships and so may become less dependable than specific CPS companies.
- High control and exclusivity over channels maybe losing effectiveness.
- CPS companies can benefit from fertilizer needs and align with fertilizer companies to provide bundle and barter options, and integrate value chain strategies.
- Dealers expansion in terms of new products and towards new regions are increasing channel conflicts.
- Some of the traditional relationship programs based on rebates for dealers and farmers, built in a different environment, are being challenged.
- Growth of dealers, farmers and cooperatives tend to affect more the pricing policies of CPS companies.
- The entrance of trading companies in the distribution channels of CPS companies can also increase bargaining power and the level of channel conflicts.
- Competition among channels and channel conflicts are increasing.
- There is a shift in the bargaining power with the empowerment of dealers, farmers and coops.
- There is an increasing dependence on major distributors that may offer complete solutions to the farmer.
- There are both challenges and opportunities to leverage business with different relationship approaches.
- Cooperatives are being challenged by informed farmers and their boards to increase purchasing power (buy cheaper).

Discussion question

Based on these facts and impacts, what are the major acts, or projects, a CPS company should implement?

Chapter 15

The Food Crisis Will Be Back*

This chapter deals with a problem that arose in 2007 and part of 2008 and will come back sooner than expected due to several factors. This problem is food demand and as a consequence, food price increase.

There are nine major factors (see Figure 15.1) that are changing and placing pressure on the capacity to supply food to the world, and these are related to economic and financial crisis.

Increase in areas dedicated for growing crops for biofuels: Several countries are starting production of biofuels, in some cases, land allocated for food production is being diverted. Now the tank of the car is a competitor of the stomach. Both want food! Many studies are only linking biofuels to the cause of food inflation, ignoring several other factors, some of which we have known for a long time. Biofuels is not the major problem, since there are very positive results of biofuels being produced in areas together with increases in food production, but this factor should be considered.

The growth of world population, expected to reach 9 billion people in 2050, is not a new factor, but it contributes to a higher need of food production. FAO/ONU estimates that the world will need to produce at least 50% more food in the next 15 years. Projections of future demand for grains (2.2 billion in 2009 to 3.3 billion in 2025), milk (3.4 billion tons in 2009 to 5 billion tons in 2017) and meat are impressive. Just as an example, the MENA (Middle East and North African) countries have a population of around 380 million today, and will have 510 million in 2025.

Economic development and income distribution: One of the most exciting factors is that populated countries such as India, Brazil, Eastern Europe, China, Indonesia, Thailand, South Africa, Argentina and Arabian and African countries among others are bringing millions of new food consumers to the market. Several African

*First published in *China Daily* (July 7, 2009).

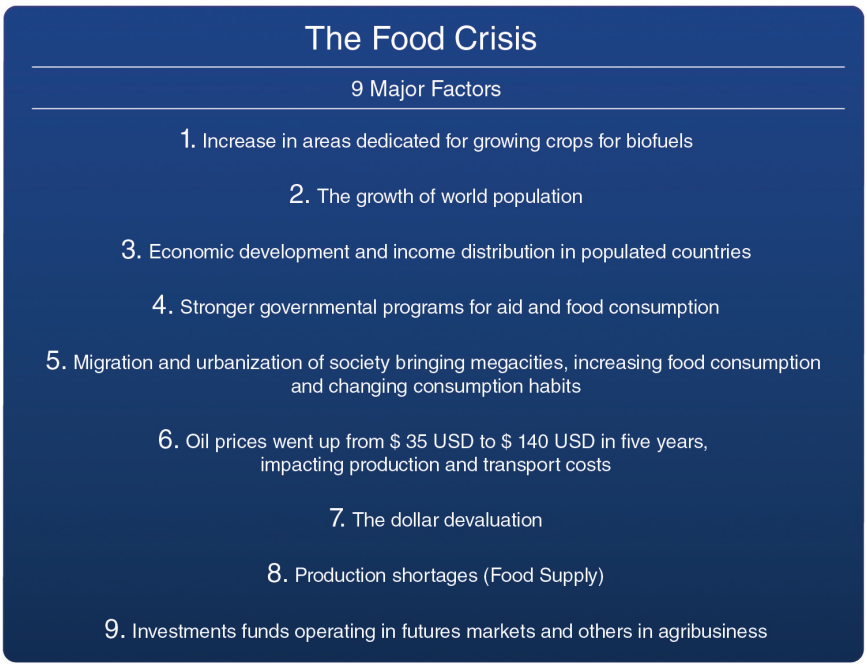


Figure 15.1 The food crisis and its Causes.

Source: Author.

economies have grown by more than 5% per year in the last 5–10 years. Experts in food consumption expect an increase in 50% in food expenditure in China, 78% in India, 40% in developing Asia, Middle East and North Africa, in the next 10 years (Global Demographics Report, 2008). From a proportion of 60%/40% consumption in developed and emerging economies, in 10 years time, food markets will be 50/50%. When one compares China's population with the country's participation in world trade, it is still less than 50%. There is a lot to come.

Stronger governmental programs: Programs for aid and food consumption, such as the one done in Brazil reaching 10 million families and 40 million people, can help new consumers coming to the food markets. Just as an example, the market for sausages in Brazil went from US$0.5 billion in 2003 to US$1 billion in 2007. Thailand has 10 million people receiving a check of US$58 per month. These are just some examples, happening all over the world. Several signs are present, and they are not being captured in an adequate way by major economists.

Migration and urbanization: These phenomena are creating mega-cities, increasing food consumption and changing consumption habits toward less grains, and more proteins (using more grain as feed in the animal production process); consumption

is getting more customized, more sophisticated and more energy consuming. There is also a huge impact here, when you consider that in several countries, 50% of the population is still in rural areas, and moving to cities. A study estimates that around 350 million people in China will move to cities by 2025. This will require five million buildings, increased demand for computers, televisions, air conditioners and new food consumption habits (demand equivalent to 10 times the city of New York).

Oil prices: The prices went up from US$35 to US$140 in five years, impacting production and transport costs. It is rising again, and oil is now not restricted for use only in transportation. It is also used in several other industries, like plastics, whose consumption levels have increased. Oil may be stable around US$70–US$80 a barrel, and with oil prices up again, several possibilities and projects for biofuels gain economic incentives, increasing pressure on land in the case of corn and other grains. China had 65 million cars running in 2008 and is expected to have 150 million by 2020, consuming 250 million tons of gas per year.

Dollar devaluation: The devaluation that happened in the last years also had its part in contributing to higher commodity prices, fixed in US dollars.

Production shortages (food supply): Farm/production shortages due to lower margins, climate, droughts and diseases are a major concern. Due to the credit crunch (lack of financing) and high price fluctuations, there was a downturn in prices, the criteria of financial institutions became strict and, together with losses of bad hedging by agribusiness companies, resulted in loss of confidence. As a consequence, there were higher risks for planted areas and yields, hedging prices got worsened (less hedging), and consequently, there was more uncertainty and lack of confidence in long-term contracts. This may bring lower productivity, lower inventories, lower margins and farmers switching to cheaper crops to produce. Some exporting countries will become importers. Within the ambit of the aforementioned, there is always the concern of availability of water and costs of water and also the unknown impact of global climate change in crop productivity in the future, which is of major concern.

Investment funds: These operate in futures markets and in agri-business. This increased with lower interest rates in several countries. It is known that some of these funds have been replaced by strategic investors with conservative financing mechanisms, but there is still a movement of funds toward food commodities. This is also increasing consolidation.

Chapter 16

Strategies for Solving the Food Inflation Problem

There are two ways to solve the challenges associated with expected food demand/inflation. One is going back to an increase in protectionism, stimulating noncompetitive areas to produce in an "economically artificial environment" and returning to the policies of "self-sufficiency" of war times. The other is moving toward growth, global trade and inclusion. Here, a 10-point agenda (see Table 16.1) is offered to governments and international organizations as a solution to solve the upcoming food demand and inflation problem, which could be the right avenue to follow in providing long-term results, peace, fair income distribution and inclusion. They will be addressed in sequence.

Promote horizontal expansion in production into new areas, with environmental sustainability. This expansion can be done in several countries (South America uses only 25% of its capacity), in all continents, in millions of hectares that today are poorly used. In Brazil, several studies by recognized institutions confirm the existence of more than 100 million hectares that can be utilized for food and biofuels production, without touching fragile systems and mostly growing over degraded pastures. These production and land expansions, if stimulated with sustainable contracts, will bring inclusion in farming, new entrepreneurs, job creations in less developed nations, fair income distribution and economic development, even having a positive impact in democracy. Land costs are getting higher since several pension funds are looking for security and thus buying land. Recently, a fund of US$ 800 million in Arabian countries was dedicated to land buying and food security, having South American and African countries as targets (*Financial Times*). There have been several efforts by China and other countries in building such supply chains abroad. This is a perfect match of investments to achieve development.

Increase productivity or create vertical expansions (more production in areas that are already being utilized). Several hectares in South America, in Africa, in Asia, and even in developed nations could produce more yields if more and better technologies were

Table 16.1

The Food Demand Model

Nine Causes of Food Prices Increase	Ten Proposed Solutions
→ Biofuels	→ Sustainable horizontal expansion toward new areas
→ Population growth	→ Vertical expansion with more technology (high tech)
→ Income distribution and wealth in populated countries	→ Reduction in food taxes and other protections
→ Governmental programs for food distribution	→ Investments in international logistics platform
→ Urbanization of population and mega-cities	→ Use the best sources for biofuels production
→ Oil prices impact on production and transportation costs	→ Reduction in transaction costs in food chains
→ Production shortages due to adverse climate and financial conditions, water and climate change impacts	→ New-generation fertilizers
	→ Sustainable supply contracts to farmers
	→ Innovations (genetics and others)
	→ Consumption behavior for less energy consumption
→ Dollar devaluation	
→ Investment funds operating in commodities	

Source: Author

used and associated investments were made. If one compares the amount of corn a US farmer can generate in tons per acre, it is two or even three times higher than the average production of Brazil and other countries. With irrigation, some farms on the tropics can generate three crops per year. Major research and investments should be dedicated to these improvements.

Reduce food import taxes and other import barriers and protections. Food prices in some countries are artificially inflated due to import taxes and other kinds of protection that damage international trade, markets and growth. As an example, beef in the European Union costs four or five times higher than the same quality beef in an Argentinean or Brazilian store of the same European retailer. The argument mostly used is that lowering protection will damage local agriculture of less developed countries. It must be assumed now that the new level of commodity prices may allow local agriculture to be competitive. Several other internal taxes on food can also be reduced by local governments, reducing consumer prices. Additionally, the more than US$330 billion spent annually by OECD members in agricultural subsidies is putting more pressure on prices while undermining more cost-efficient food production in naturally competitive countries.

Invest in international logistics in order to reduce food costs. Some grain-producing countries suffer from extremely poor logistics. Governments should invest and society should work harder to reform institutions in order to facilitate public–private partnerships to privatize ports, roads and other food distribution and logistics equipment to increase the flow volumes and reduce energy consumption.

Reduce transaction costs. Major international food chains are poorly coordinated and have several redundancies, poor use of assets, corruption, opportunism and other inefficiencies, which are largely responsible for losses. This increases the costs and maintenance of nonvalue-adding companies, agents, etc., thereby impacting food prices. Institutional reforms, as proposed by Douglass North, are the solution here. Also, more efficient cooperatives, producer pools, and other collective actions should gain strength to reduce redundancies and increase producer organization and bargaining power.

Use the best sources for biofuels, in a totally sustainable way. The example of Brazil could be better analyzed, where ethanol has been produced for more than 35 years, on 3.5 million hectares of cane, using only 1% of the country's arable land and supplying 52% of fuel transport consumption, with no impact on food production. The growth of food production and biofuels together in the state of São Paulo (the major area of sugarcane growth) in the last 10 years shows that it is possible to combine both food and biofuel crops production. Crops for biofuels that have better yields and do not compete with food chains should be prioritized in the global development of biofuels. The energy balance of sugar cane ethanol is 4.5 times better than that of ethanol produced from sugar beet or wheat, and almost seven times better than ethanol produced from corn.

Invest in a new generation of fertilizers. It is important to produce fertilizers from alternative sources, plants that can absorb more energy of the sun, more recycling of by-products as sources of fertilizers would mitigate the huge risk and cost of fertilizers in the future. Fertilizers are among the most important and expensive inputs for agriculture, and in the present times when the yield must be improved, its importance grows even bigger.

Work more toward sustainable supply contracts for farmers, with integrated sustainable investments and projects. It is of fundamental importance that margins and incomes should be better distributed in food chains, reaching farmers all over the world. Price stimulus is the best economic incentive for growth in production with technology. It is well known and studied how concentration in several food industries and retailing retains margins that could be better distributed to farmers thus increasing economic development and bringing a very positive externality to several regions.

Stimulate research and investments in innovation from all possible sources. This should be pursued mostly in genetics, in order to find new solutions for food and biofuels production and consumption. In trying to solve the sustainability equation, seeds are a problem today, due to shortages. Public investments in agricultural research and development have decreased considerably in the past couple of decades, resulting in a yield-growth slowdown, disabling production and the ability to keep up with rising consumption. Since trust in biotechnology is increasing in society, bringing a new era of acceptance, research should receive more attention.

Slowly work to change consumption habits in both food and fuel. We must realize that supporting nine billion people in the planet in a sustainable manner will present several challenges. Hence, behavior of people should gradually be changed toward

sustainability. Food is overconsumed in several parts of the world, bringing with it obesity — a major health concern. Another area of inefficient consumption is fuel. Investments need to be made in resourceful public transportation. This is a major challenge in many countries. For example, Barcelona has implemented a well-planned public biking system, which is an excellent example of a working solution. Table 16.1 summarizes the causes and the proposed solutions.

Discussion question (Chapters 15 and 16)

Do you know of any other additional points that could be termed as causes and solutions to the food demand model? How would you rank these causes and solutions according to their importance?

Chapter 17

Bridging the Food Dilemma: The Case of China and Brazil*

Trade flows between China and Latin American countries increased from US$10 billion in 2000 to US$140 billion in 2008. China and Brazil have strong complementarities and a long history of peace and acceptance. There is a huge Chinese community living in Brazil, which is well integrated with Brazil's multiracial and multicultural society. The Chinese are recognized as hard workers, setting up businesses in Brazil and contributing to the economy in the last 50 years.

China is world's largest developing nation, with the highest improvement in living standards in the world. In this very positive scenario of development, China will face problems in securing food supply for its own growing, richer urban society. These problems could be related to costs, clean water, water availability, soil conditions, land, environment and others. Brazil, on the other hand, has 850 million hectares of land. There are 350 million hectares of arable land, and of these, only 70 million are being used for crops; 200 million are used for pastures, and another 80 million is new land to be conquered. In sum, there are 100 million hectares that could be converted to agriculture, in a sustainable way.

In the coming years, Brazil has an opportunity to be the most important partner to supply food and biofuels to China, in the food security aspect. Just as an example, soybean exports from Brazil to China grew by 27% from 2008 to 2009. Brazil's participation in total China's imports increased from 0.7% in 2003 to almost 3% in 2009, and it is expected to grow faster due to imports of poultry, beef and other protein sources and food, which are in the nascent stages. The risks of producing food in Brazil are very low, almost zero, since the country is a large food producer and exporter, with plenty of land and food in the internal market, reducing risks of political or institutional changes, like banning exports or expropriating assets as seen

* First published in *China Daily* (August 31, 2009).

in several other countries. It is an open market for Chinese companies to produce food in Brazil for export to China, in a safe way.

Another great opportunity is to have common investments to enable Brazil to help China to address environmental concerns. Brazil has one of the cleanest energy matrices in the world. China has problems in water supply, and of its 600 million urban inhabitants, less than 5% have access to clean air that is in accordance with European safety standards. Again it is important to see the ethanol program, which is a positive example. About 90% of all new Brazilian cars are flexi-fuel, and of the fuel consumed in the country, ethanol has 52% against 48% of gasoline. By 2015, 80% of the internal market for fuels will be ethanol, produced in a sustainable way, from sugarcane. The area used to supply 52% of the fuel today corresponds to only 1% of the arable land. There are opportunities to produce ethanol to add to Chinese gasoline (E5% to E15%), contributing to a strong reduction in pollution in China (65% of total pollutants in the country come from auto emissions). China is also a producer of several products needed for Brazilian development as China has technology, scale and expertise.

As Brazil lacks resources for investment, this is where China may come in and participate. Logistics in Brazil are still a huge concern, mostly in grain production areas, increasing the cost of commodities and food. There are opportunities in roads, ports, airports, storage capacity, pipelines for ethanol, and several other investments. Another challenge, where Brazil is moving very rapidly, is to adapt food production toward international standards of sustainability.

China and Brazil have a role together in the future, and this is very clear. China will be the world leader and the most important economy in a few years. It has a history with Brazil, of common respect and admiration. It is a perfect match. The countries should immediately work on topics related to one major question "how to enhance future food trade with a win-win relationship?" The cooperation must include linking institutions toward a better future, doing research together, linking the business communities in order to start and improve businesses, common investments and linking universities in interchange programs. Basically, place people of both countries in contact toward the development of a new world, with economic, environmental, human sustainability and with tolerance toward differences. Table 17.1 summarizes the Food Bridge Concept.

Table 17.1

"The Food Bridge Concept."

Brazil	China
➜ Lacks investment capacity and logistics.	➜ Has the largest capacity for international investments and logistics.
➜ Can rapidly expand food production.	➜ Faces an incredible growth of income and urbanization and will need more food.
➜ Has several possibilities for international investments.	➜ Has a large number of investors to invest and take advantage of opportunities in Brazil.
➜ Has low population/land availability ratio, and around 100 million hectares available for development. It's the world's largest exporter of beef, poultry, soybeans, juices, sugar, biofuels, coffee and in 5 - 10 years will be the major food exporter of the most important food chains.	➜ Low levels of new land available for food production and is thinking of investing abroad to guarantee food security. Scarcity of water for agriculture in some areas, and environmental pressures.
➜ Sufficient supply of water for agriculture.	➜ In 5 - 10 years will need quantities of food from abroad and most of this food will come from Brazil.
➜ Is a net producer and exporter of the most efficient biofuel, the sugarcane-based ethanol, used as E100 and E25 (100% ethanol cars and 25% ethanol in gasoline).	➜ Will need to expand biofuels production and usage toward a cleaner environment, adding biofuels to gasoline (E5 or E10%) and other. These biofuels can be produced by Chinese investments in Brazil and Africa.
➜ Has one of the highest mixed-raced populations in the world and a long-term acceptance of the Chinese community living in Brazil.	➜ Has a large Chinese community living in Brazil for several years.
➜ The federal government has given great importance to relations with China.	➜ Very good relationship on a federal level with Brazil.

Source: Author

Discussion question

How do you evaluate the "Food Bridge Concept"? Would you add or remove points to consider?

Chapter 18

Interesting Differences of Developed and Emerging Economies*

This chapter has the objective of classifying some differences seen in emerging and developed economies. How can these countries be generally characterized, what are the major concerns and specificities and the huge differences that exist, probably the speed of growth and development being the most important.

The world economy can be understood as several markets, inter-communicated and linked in different blocks, with totally different dynamics. The world markets are a much more complex environment. In this context, it is necessary to evaluate and differentiate the present economic profiles of these markets. These profiles are dynamic and change with the fast changing political, economic, social and technological environments.

Nowadays, markets can be divided into two major groups: Developed and mature markets represented by countries belonging to the European Union, Canada, US, Japan, South Korea, and those under development, called emerging economies or countries, such as Brazil, India, China, Russia, South Africa (the so-called BRICS) and several other Asian, African, Eastern European and Latin American economies.

It is quite a challenge, but I try here to establish some points of comparison and to classify what is going on in these two categories. Several problems arise from this comparison, since inside each block there are several differences and even levels of development that cannot be compared, but to generalize, these characteristics might be useful to settle a "go to market strategy."

The analyzed aspects are listed below, and after that, Table 18.1 with the analysis summarizes the differences between the various aspects in developed and emerging economies: gross domestic product (GDP); size of population; degree of

* First published in *China Daily* (December 19, 2012).

Table 18.1

"Major Differences Among Developed and Emerging Economies"

Developed Countries	Parameter of Analysis	Emerging Countries
→ Stable	GDP	→ Growing
→ Relatively stable	Population	→ Growing
→ Relatively stable	Urbanization of population	→ Urbanization growing fast and emerging of mega-cities
→ Mature or declining	Food markets	→ Sales are booming
→ Small effect on consumption	Income growth and income distribution	→ Huge impact on consumption (still a high percentage of income spent on food)
→ Well educated	Consumer profile	→ Being educated
→ More homogenous group	Countries characteristics	→ Different segments of emerging economies, difficult to agregate
→ High quality and sophisticated markets	Quality (food safety) in markets	→ High level of informal markets and food safety under construction
→ High percentage of consumption (expenditure) in foodservice	Food service share in food consumption	→ Smaller participation of expenditure in food service
→ Quite stable	Retail systems	→ In huge transformation
→ Limited possibility	Expansion of commodity production	→ High possibility
→ High sensitivity of population and severe laws, recycling and consciousness	Environment and preservation issues	→ Low sensitivity of population and regulation being built
→ Growing faster	Adoption of biofuels	→ Low
→ Healthy, veggies, fruits, organics, among others	Consumption directed to:	→ Quantity (protein)
→ Developed and mature	Logistics and transport systems	→ Early stage of development, immature
→ Consolidated, respected and well known	Institutional environment	→ Being built, with high transaction costs

Source: Author

urbanization; maturity of food markets; impact of income growth and distribution; consumer profile; groups of countries profiles; quality (food safety) in markets; participation (share) of food service; status of retail systems; expansion of commodity production possibilities; environment and preservation issues; adoption of biofuels; profile of consumption; maturity of logistics and infrastructure; institutional environment.

An analysis of this table shows that developed markets are more mature and stable, have predictable characteristics with very well established aspects, for example, logistics, retail and institutional environment. This maturity is reflected in the population that tends to search for differentiated products and services, featuring various niches as those seeking healthy products, environmental and social trends, among others.

Discussion question

Evaluate the major differences and list new parameters that could be added? How should developed and emerging countries be characterized?

Chapter 19

How Can Chinese Companies Feed the World?*

At a recent international food and agribusiness congress in Shanghai, there was a debate about the ability of local Chinese food companies to become international companies in the coming years. That means departing from their activities in China toward a more global presence, like the major food multinational corporations.

At the root of the issue are three key matters: why Chinese food companies are not yet internationalized to supply food from China to the world; the major difficulties that Chinese investment faces abroad; and the internationalization opportunities for Chinese companies in this new era where food and biofuels will be important trade topics in the coming years.

First, it must be recognized that China has several brands that could become international and as that happens the complexity of international operations would need to be learned. There has been a concerted push to innovate, and in several areas Chinese products are regarded as being of very high quality.

These are companies that take advantage of a strong Chinese domestic market and are mostly engineering-led companies with the ability to invest in key assets, maintaining their core business with a global leadership team, structures and strategies. It's a beautiful story: taking advantage of economies of scale and scope, these Chinese companies have gone outside China and are having some success.

But an intriguing question arises after studying the success of engineering companies and others that have gone global: Why this internationalization does not happen with Chinese food companies? That this is so becomes clear when you consider that none of the world's 25 largest food transnational companies is Chinese.

It is argued that the Chinese food industry is handicapped by low investment in research and development, by issues of food safety and quality in the production

* First published in *China Daily* (August 10, 2012).

process, by the fact that there are no recognized large brands outside China, and by difficulties in marketing due to a general perception that its brands are of poor quality.

Although the Chinese government can subsidize this internationalization strategy, other difficulties stand in the way of Chinese food companies wanting to go global: the lack of water, soil, uneven development of infrastructure, production yields, the structure of rural society, lack of agribusiness talent for large-scale operations and the huge internal market that would consume what these companies produce.

The list of difficulties is long, but this does not mean Chinese food companies cannot go global. It is only a matter of time, and I see two major groups with the best chances of achieving this.

The first group consists of food companies that produce specialties or other products where the internal market can be easily supplied and there is surplus to export. These are mostly companies whose products do not demand large amounts of soil, water and other resources. They may be among the first to go global. The second group consists of Chinese companies that produce and mostly source food in other parts of the world, and who market their products worldwide, first bringing them to the large Chinese internal market.

For the moment, it is clear that Chinese agricultural and food business investment overseas faces many hurdles. First, management styles and the global mindset, particularly considering language and culture, present difficulties for Chinese.

Next, there may be a perception by local communities that Chinese investment represents a "new colonialism," that it results in the extraction of local resources with no discernible benefit to the local community.

Chinese food companies may also find it difficult to understand the local institutional environment and the complexity of laws and regulations, resulting in higher costs.

Another issue is protectionism in some markets, which will close the door to Chinese investment.

There are at least four more problems: China's insurance system does not offer enough protection against the risks of international investment by Chinese food companies or Chinese entrepreneurs; China's tax policies do not encourage such investments; some countries see it as a labor export strategy for China and reject it, arguing that all the labor force will be Chinese; and finally Chinese companies fail to work together which prevents them from learning each other's failures and avoid pitfalls.

Although these hurdles need to be negotiated, there is every opportunity for Chinese food companies to become global, particularly because in several parts of the world there is an abundance of natural resources to expand food production but the capital to do so is lacking. In this regard, Brazil, Argentina and African countries come to mind. Brazil, for example, is highly receptive to Chinese investment and the institutional framework for this, to some extent, is already in place.

With China's large and growing internal food market, we cannot expect that, in general, it would be a large supplier of food to the world; it will, however, continue to be a large food importer. But in some specific markets, food produced in China could reach the world, and Chinese food companies have a good chance of becoming international food exporters.

There is a large opportunity for Chinese companies to source food in several parts of the world, mostly in the countries that have natural resources, thus making the companies real food multinationals. This could be done by acquisitions or by building from the ground up.

So confident am I that this will happen that I am ready to bet that by 2020 at least three Chinese companies will figure among the world's 25 largest multinational food corporations.

Discussion question:

What are your perceptions about internationalization of Chinese food companies? List the opportunities that would arise for your organization from this internalization?

Chapter 20

Structural Challenges in Chinese Food and Meat Chains*

The objective of this analysis is to share with *China Daily* readers a recent workshop that I had the opportunity to coordinate in Shanghai, on June 12, during the events to launch my new Chinese book "*The World on the Tongue*," by Central Compilation and Translation Press.

In this event, around 15 of the largest pork and poultry producers and processors operating in China stood for around five hours debating the future of the industry. It was a very interesting debate with enthusiastic people deliberating about a brilliant future.

This article summarizes the good news and opportunities, mostly related to the worldwide growth of food markets and also raises the major challenges for industries operating in the meat markets in China.

First, there are several opportunities open for growth in the Chinese meat markets. Projections show that internal markets in 2030 will comprise around 1.5 billion consumers and urbanization will be around 70%, bringing incredible changes in consumption patterns.

In the next 20 years, income is expected to grow at an average of 5% to 8% per year, so with this, GDP per capita in China would rise from US$5,500 to US$15,000 in 2030. The major impact of this fact is that there would be an increase of almost 15 kg in the per-capita consumption of meat by 2030, lifting from 57.3 kg to almost 70 kg per person. It is an incredible development of markets, bringing a lot of opportunities and also challenges.

---

* First published in *China Daily* (June 29, 2012).

In order to face this growth and accomplish new macro-environmental changes, several challenges were raised by these executives and will be summarized below.

(a) Human resources management, both in availability of trained employees and to face the cost increase of labor, due to higher salaries and benefits, estimated in more than 30%.
(b) Adaptation to new governmental regulations towards food security in China will increase production costs and regulations regarding feeding the animals may reduce the amount of products used as feed.
(c) Government policies towards improvement of small and medium size companies will also change the industry in the near future, since some of these are low scale and have low productivity;
(d) Government policies towards usage of land in China will challenge the growth of this industry mostly because of the growth of municipalities and Chinese companies will need to expand internationally to secure supply chains.
(e) Diseases would spread due to the density of production bringing risks of severe epidemics and frequent outbreaks.
(f) Cross regional development of logistics toward inlands of China, where there is a growing market and production.
(g) How to adjust the strategy to this fast growth needed together with promoting sustainability, due to an increase in environmental concerns and media coverage, will be a challenge.
(h) The need to innovate is also a challenge. Innovations that increase profitability in the production systems via promoting vigorous scientific and technological projects are required.
(i) Information management, mostly in how to follow the market information and select the most relevant for decision-making.
(j) The need to face global competition and opening of markets.
(k) Price volatility of grains may increase the need to develop long-term procurement strategies.
(l) Gradual improvement of institutional environment in China.
(m) The need to improve financial support for new investments.
(n) Improvements in collective actions, with better chain organization and coordination.
(o) Improvements in management capacity to understand and adapt to the new environment.

As seen, the major challenges raised by these executives are tough but they appear in a market that is growing, so it is a question of adjustments. The major dilemmas will be to localize or globalize production, to focus or to diversify towards different food business, to promote growth via public or private companies and the capacity to understand and adapt.

As moderator, I received a last question about globalization and the future positioning of Brazil in the grain and meat industries. The question if Chinese investments in Brazil to complement the production needed to face the demand would be welcome, and, finally, if it would require buying land abroad. My opinion, shared more than two years ago with *China Daily* readers is that this is what I called "the food bridge," meaning food being produced in Brazil and supplied to China, as the major trade in 2020.

There are plenty of investment opportunities for Chinese grain and meat companies in Brazil and I think the most interesting investments would be in origination (industries for processing with networks of contracted suppliers) and not in land, which requires higher volume of resources and faces restrictions.

There is a lot to come in the near future for Chinese pork and poultry companies and this article summarized the discussions of this workshop.

Discussion question

How would these challenges evolve in the future? How will these challenges affect your organization bringing opportunities and threats?

Chapter 21

An Incredible Journey through India*

Almost two weeks of traveling in four big cities (Mumbai, Hyderabad, Chennai and Delhi) and several rural villages of India is an incredible and unforgettable experience. My learning was present in every street, road, building, sightseeing, travelling in taxis, or whatever interactions with its people and geography.

The consumption details of this very diverse society were perceived at every meal, either taken in the luxury Taj Hotel's restaurants, in booming fast foods or in small villages, with farmers. After this visit, I came back convinced that in several places of the world we will see changes in the next 10–20 years, but seems to me that India will have the leading speed of changes. In India, definitely things will happen.

This article has three parts, first to address some socio-economic numbers and impressions, second to talk about agricultural development and challenges, and third to share the development agenda learned and discussed.

Walking on the streets feeling that you are in a country of more than 1.2 billion inhabitants place, that grows almost two million people per month, or 20 million in a year, or one South Africa each two and a half years, or one Brazil each 10 years or even… one USA in 15 years is… unique.

Being the world's fourth largest economy based on purchasing power parity and growing from 6% to 10% per year in terms of GDP, we may imagine that in 10 years from now we will have one more India in place.

It is a large economy of still poor people, having very unusual consumption patterns. This characteristic takes us to lot of people consuming products occasionally or in small portions. It is, for most of its population, a business with low margins but large volumes. India means a large aggregation of small parts.

---

*First published in *China Daily* (April 10, 2013).

It is quite a heterogeneous society, a unique cocktail, difficult to be found elsewhere. And this heterogeneity seems to be increasing due to the internationalization of Indian society. We see the mix of local diverse culture with occidental culture coming in with Indian students returning back from experiences abroad, fast food chains moving in, web access and other facts.

India has gone through an impressive process of information and technology, so people are connected, mostly the younger generations from all social classes. An Indian economist told that 40% of the population has access to toilets but 50% to mobile phones. They are typing all the time and talking.

It is a well-known country for its business process outsourcing, for building up smart solutions, a service driven society, which definitely changes the way companies do business, offer services or charge for guarantees. India has interesting small business models, from people dedicated to cook, going to houses, dedicated to laundry, clothing, whatever.

India is also famous for its micro-credit initiatives and huge programs of financial inclusion using the bank system, based on technology platforms.

My taxi drivers during these days showed incredible performance in this unique experience of driving through the streets and roads in India. I can't understand why India doesn't have Formula 1 champions. The culture of the "horn" is a nice way to manage a mess that is in some way organized. They were always nice people (of course, sometimes with poor English) and offered creative free service. Whenever I needed them, they told me that I should phone, they wouldn't take the call and would come to the place to pick me up. This is the "missed call" movement. All for free!

I could see some efforts of the government in reducing taxes, still very high, and also I listened to several critics coming from farmers and business people due to the large size of governments and difficulties to cut costs and also a propensity to corruption. I perceived in youth a large disappointment with the government, they are frustrated with the growing cost of living, levels of corruption, delay in judicial decisions, less infrastructure investments among others. There is a common perception that the government doesn't follow the needs of the youth, and this is not a good indicator. Being from Brazil, this is nothing new for me!

The growth and development challenge can be smelt in every breath. Almost 400 million people in India survive with a daily income of US$1.25. It is a country with still more than 60% of the population in rural areas, which is a huge challenge. The incredible information that Mumbai grows by 400,000 people per year was given to me.

But it was also said that the major urbanization changes are happening in the enormous amount of 50–100 thousand people cities, much more manageable. The major impact of urbanization is the change in consumption habits. While in the US fast food sector grows 4% per year, in India it is growing 35% per year. Specialists say that fast food market was of US$1 billion in 2010, and may approach US$3 billion in 2015, when McDonalds plans to have 500 outlets, Yum! plans to

expand 500 new units of Pizza Hut, Taco Bell and KFC and Domino's Pizza also expanding its 500 units.

Another topic that deserves our attention is that India is a very young country. While in China we have the policy of one child per couple, India grows fast and has today almost 600 million people with ages below 25 and 225 million among 10 to 20 years. India will have in the future a huge amount of people at working ages, and this is a very competitive factor. The decision here is crucial, not only for India, but for several countries like Brazil.

To transform this immense youth in what I call a cargo truck, to help carry the society forward, than to leave them without support and transform them in cargo to be transported by others, is probably the major challenge of these countries.

In 2013, with several improvement suggestions, India is launching the "food security bill," to create obligations for the State to guarantee food to every person that lacks resources to purchase the minimum amount of food for a healthy life. This fact will bring huge impact in food chains and food imports, since it means investments of federal budget in the food markets. India is still far behind the development China had in reducing poverty and this government regulation can really alter the future of India, solving problems of poverty and giving conditions to a much more competitive society in the future.

This is India, a country that gives several important signals to international society.

In this second part about India, I give some information about agriculture, collected in two weeks of visits and interviews and raise some of the topics that make part of the strategic agribusiness agenda. As a first impression, Indians have a passion to own land and this land is what will be passed to their children. Indians love children too!

India has a large proportion of arable land, 180 million hectares, almost 60% of the land existing (330 million hectares of surface) and produces the second largest crop in the world. It is a very challenging land structure, since almost 75% of the land is in properties of less than 5 ha, and as average, one to two hectares per farming family. Imagine land ownership in the future, dividing this area among children.

Agriculture is strongly dependent on the monsoon and the amount of rain that it will bring. The monsoon is directly responsible for the amount of income available in a particular year.

We can find a great diversity of climates, allowing several products to be produced. India, after China, is the second largest producer of rice and wheat, fruits and vegetables. Rice is a major crop, occupying 44 million hectares and producing more than 90 million tons. Wheat also is an important product, with more than 80 million tons per year. Corn occupies 8 million hectares. India is among the world's five largest producers of 80% of the crops (agriculture produce items).

Agriculture has seen a huge development due to adoption of technology. Grain production jumped from 50 million tons in 1950 to more than 250 million tons in 2012. Irrigated area in India increased from around 20 million ha in 1950 to

65 million in 2010. By 2012, around 17% of India's agricultural output is exported and it still is the primary occupation of 52% of local population. But due to this population growth, per capita availability of grains fell 10 kg in ten years.

Several other changes can be seen. Farmland management is also concentrating, with the growth of land lease and more efforts to build scale, probably the biggest challenge in India's agriculture.

Due to the industrial and services business growth, as in most countries facing urban development, it is only natural that agricultural share in GDP has declined, from 56% in 1950 to 14% in 2012. There is a movement of a more feminization of agriculture and Brazil is also an example of this issue.

Several challenges face the fast development of agriculture in India. In the innovation process, according to companies interviewed, the regulatory systems are an issue, long time is taken to register products. The challenge of urban areas advancing over farming areas and labor costs increased 50% in the last two years since the service sector is attracting people previously available for agriculture. Although India has a lot of water, it is also becoming an issue, due to pollution, usage by its growing population and other challenges.

India will also have to develop food safety (quality) and traceability, environmental protection laws, improve labor laws that definitely will increase its production cost in the future, like what I have seen in Brazil in the last 10 years.

Productivity of Indian agriculture is still very low and this means that several growth possibilities are possible. In China, the average size of properties is half the size of India, but productivity is the double in most crops. India produces as average, 50% to 60% of the world's benchmark in each crop, meaning that it is possible to improve production in India, using the same land.

Finally, the third and last part of the article is the strategic agenda for Indian's agricultural competitiveness. It is not different from most of the countries. It involves:

(a) Increase in social improvement programs: It is believed that a desire to increase social security programs with a focus more on investments and less on subsidies would these programs more sustainable.
(b) Research and development: This refers to attracting more private investments in research, considering local specificities and farmers needs and encouraging more private and public partnerships. Research should be driven to reduce country's disparities, promoting more extension to reach farmers with innovation outputs and toward water uncertainty.
(c) Human capital: Increase youth health, nutrition and education, implement capacity building policies in agriculture and also initiate vocational training.
(d) More value capture and diversification: Efforts should be taken toward intensification of crops (from grains to poultry), diversification to crops where lands could be better used and supply more value (from sugarcane to horticulture and fruit production) and collective actions of farmers.

(e) Infrastructure: Improve investments in rural infrastructure, build more storage capacity, water storage capacity, stock operation and policies, improve cold chains, among others.

(f) Increase in agricultural production: Efforts should be taken to increase the yields and adopt modern farm technology, build storage and reduce waste, improve irrigation, provide access to credit, improvise land lease and land management and finally invest in mechanization (improving number of tractors, harvesters, and other equipment).

(g) Institutional environment: This involves gradually moving to a less regulated and more market driven agricultural chains, with clear, efficient and better managed organizations promoting institutional development.

India is a fascinating country. I really think it is in India that we will see real and rapid changes. In the next 10–15 years, India is poised for greater increase in its incomes and population leading to huge urbanization. Such growth would increase its opportunities to improve agricultural output, productivity along with improvements in its minimum wage and other social support programs. I believe India would strongly increase its participation in world food imports and definitely would be one of the superpowers in world economy, GDP, products and services trade.

Discussion question

What are your views and perceptions about India's role in future agricultural trade? How would this create opportunities and challenges for your company?

Chapter 22

What to Expect from Africa?*

Since 2006, when I first landed at O.R. Tambo International Airport and after South Africa World Cup 2010 turned it into a wonderful airport, I had the chance to visit several places in South Africa and delivered more than ten lectures in conferences, universities, public and private organizations.

I have traveled from the busy Johannesburg to the world class and marvelous Cape Town. I also visited cooperatives in Malmesberry and the legalist Bloemfontein to Bothaville, home of Nampo Park, the largest exhibition facility in South Africa. I also had a chance to visit the wonderful mountains of Clarens and Drakensberg, the cosmopolitan Pretoria and also other places of this lovely country.

In all these visits, I had opportunities to engage in deep discussions with producers, industry organizations and with government officials about Africa as a whole, to collect a lot of materials and learn about this unique continent by indulging in my favorite activity: asking questions and listening to people. I should not forget to tell the reader about the chance of tasting wonderful Pinotage red wines in Stellenbosch, in a scenario of dreams.

Although I have not had the chance to personally visit other African countries yet, I will try to generalize these ideas here for the benefit of the whole continent, well knowing that in Africa we have 55 countries and thousands of languages.

Africa had a continuous, but not homogeneous development in the last years, and it is well recognized that the countries that retreated from socialist economic models are performing better. Most African countries are now democracies. We have seen also empowerment of private businesses by governments and in several countries violence is declining, due to the end of "cold war," more media attention, awakening of the society realized by internet information and also the development of institutions. Some countries went through disarmament policies and policies to increase education, improving living patterns.

---

* First published in *China Daily* (May 1, 2013).

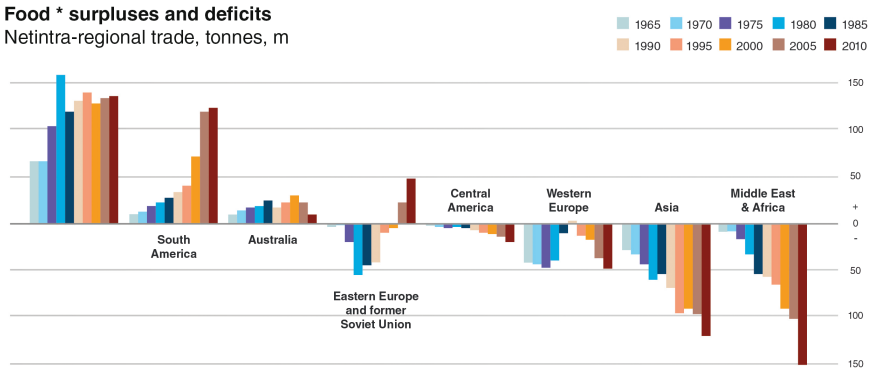


Figure 22.1: Food surpluses and deficits

Source: Mckinsey using data from FAO and USDA.

Africa normally isn't the major focus of attention of most food and agribusiness strategists, and this is a huge mistake under two lens or better saying, points of view: consumption and production.

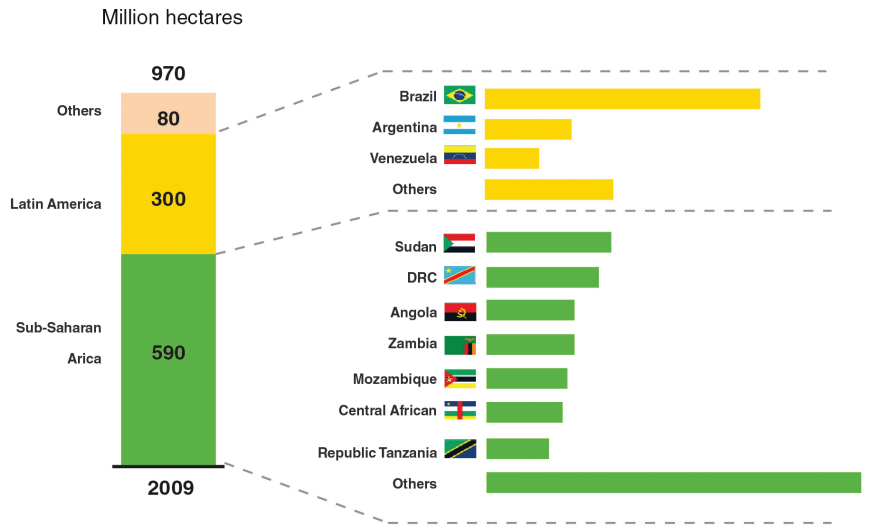
In the lens of consumption, it is important to say that Africa, together with the Middle East, is the largest food importer of the world, as you can see in Figure 22.1.

The growth of Africa as a food importer is justified by the large economic growth of several countries (continuous growth of 6–10% in GDP per year) followed by some income distribution and growth of middle class. African countries are also facing the growth in urbanization and we may remember that some countries have very large populations, like Nigeria (165 million inhabitants), Ethiopia, Egypt and Congo (from 75 to 90 million), South Africa, Uganda, Kenya and Sudan from 35 to 50 million and with around 20–30 million inhabitants we have Mozambique, Cameroon, Ghana, Cote D'Ivoire, Morocco, Algeria, Madagascar and Angola. Africa has 55 cities with more than 1 million inhabitants and still 40% of urban population.

It is expected that Africa and Middle East will respond for 50% of world's meat import growth till 2022, 53% of wheat, 50% of rice and 25% of soybean oil. With the food consumption in Africa continuing to rise, some countries are developing policies towards food security.

In the lens of food production, it is also a mistake not to pay great attention to Africa. It is recognized that South America is growing fast and will be the future world food supplier, but I'd say that South Ame- rica would not be enough. We will need Africa to play an important role, since several African countries are full of production resources. The majority of land available to be brought to production is based in Africa (see Figure 22.2).

To feed the world within this consumption growth will put much more pressure over the resources a country or a region has to produce food. As resources, I consider



1 Cropland defined as land producing output greater than 40% of maximum yield under rain-fed conditions, excluding forest areas.

Figure 22.2: Additional available cropland, 2009

Source: McKinsey Global Institute.

land (soil), water, people, technology, information, connectivity, credit, energy (sun and power), institutions and government, storage capacity, agricultural inputs, transport and logistics and, finally, management capabilities. My general perception is that societies that own these resources and better manages them will be the ones to capture most of this food and agro related markets growth, promoting the development. And here is where Africa is still struggling.

Several issues regarding resources are perceived in Africa:

- Some countries lack institutions, political stability, high mortality rates, corruption, lack quality people in governments.
- Unsustainable agricultural practices are leading to soil and resources degradation.
- Logistics is also a huge issue and some countries that have oil are not investing these resources toward more competitiveness. Countries like South Africa face mining activities removing land from Agriculture.
- Fragmented food production systems and producers
- Difficult market access and week linkages
- Small holders isolated from commercial markets
- Productivity far below world averages
- Low credit availability

- Infrastructure not present in the way food and agriculture needs
- Lack of insurance

From these issues, an action plan with several topics emerge:

- There is an optimism toward biofuels, since they will empower African farmers and society. Some countries are already adopting these policies.
- Inclusion of black commercial producers
- Engagement of small holders
- Empower younger generations and women
- Initiate strategies to tackle the issue of food safety and security and the creation of jobs via agri-food business development
- Africa is pursuing investments that would result in sustainable job creation, inclusion of people and economic development
- Improve cross-border conditions and trade, reducing transaction costs
- Adopt standards
- Yield management and technology transfer
- Access to information and knowledge building
- Investments in building research capabilities
- Improve trade environment, laws and regulations and build committed organizations
- Improving data and information access via web and other sources
- Programs for better usage of the resources listed above

So there is a lot to be done in African agriculture and this brings several opportunities.

In this last part of this chapter, I would like to address common ideas from a research done with my friend Fabio Ribas Chaddad (Professor at Columbia University, Missouri), about the potential benefits for Africa from the ethanol industry development, since Africa has sun, land and water.

The Brazilian experience with the sugarcane industry — and, in particular, the recent growth fostered by ethanol mandates in Brazil and other countries — suggests that ethanol may generate the following benefits for the African people and society at large.

- A first potential benefit is that ethanol reduces dependency on foreign oil particularly as the oil industry generates increasing negative externalities and is fraught with geopolitical risks.
- A second benefit is the amount of jobs generated in all stages of the ethanol chain, from equipment suppliers to ethanol distribution systems, but also including allied industries such as research, trade and services.

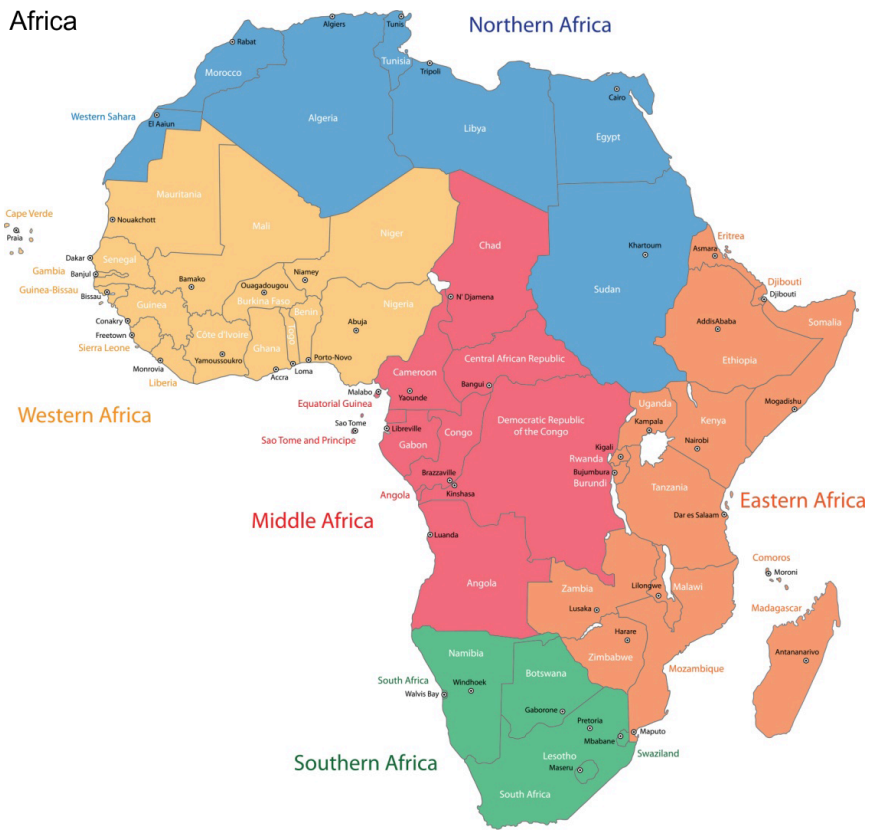
- One of the most important potential benefits for the African people is the immediate reduction in pollution in large cities. As compared to gasoline and diesel, emissions from engines run on ethanol are increasingly smaller with considerable improvements in air quality and thus quality of life.
- Another benefit for African society is to, via an ethanol strategy, increase economic relationships and trade with important emerging partners among African nations and also with other emerging economies such as Brazil, China and India.
- From a business perspective, ethanol can generate opportunities for foreign direct investment for African people and companies, selling products and making profits outside Africa and repatriating these resources to help the development and income distribution in the continent.
- These investments will also allow Africa to have access to worldclass technology that is currently dominated by ethanol producing countries.
- Finally, Africa can provide a strong contribution towards mitigation of climate change in the 21st century.

Africa can follow several strategies to foster the development of the sugarcane chain, including emulating the Brazilian experience. In what follows, we offer some possible contributions to this debate.

- A strategic plan should be developed.
- A suggestion for Africa to get started in building up supply chains is to adopt an ethanol or renewable fuel mandate (such as in Brazil, the US and the European Union, to name a few). The initial mandate could start as an E10 policy (10% of anhydrous ethanol blended to gasoline), with a perspective of moving to an E25 policy when production capabilities are in place.
- In order to be able to increase ethanol production, Africa may initially invest in agricultural research and technical assistance to produce sugarcane, sugar and ethanol in some regions with existing technologies, and subsequently develop second-generation biofuels from cellulosic sources, perhaps adapting Brazilian technologies that have been developed since the 1970s.
- An integrated model based on a network of small farmers may be a useful approach to foster sugarcane production and rural development.
- Another important possibility for Africa is to invest in ethanol production in some selected African countries with favorable conditions, which could supply other African nations. This would serve as the basis for an oil import substitution policy aimed at substituting oil imports with ethanol produced in the continent. This strategy will reduce dependency from oil producing countries and enhance economic ties among African nations.

In conclusion, I am very positive about Africa. My view is that in the next 10 years we will talk a lot about Africa as a leading world food consumer, several investments

will be done, a real laboratory of agribusiness experiences. After the next 10 years, we will talk about Africa reaching food security and even becoming a food exporter. In Africa, there are several opportunities and the real agribusiness entrepreneurs, the ones that view ahead have scheduled their flights, are landing, or already landed in O.R. Tambo International searching for opportunities, building relationships and doing investments.



Discussion question

What is your view towards Africa? Raise a list of possible opportunities for your organization in the African context.

Chapter 23

There Are Alternative Solutions for the Food Crisis*

In the chapter *The Food Crisis Will Be Back*, I addressed the food crisis debate; the ideas came from previous research which were further developed and published in two important academic journals.

At the time of writing the chapter, we had comfortable food commodity prices and I explained that the 2007–2008 crisis was serious and structural, caused by nine factors, with different levels of responsibility (effect). Let's get back to them: use of grains and agricultural land for biofuels; population growth effects (220,000 new stomachs to feed every day); strong income increase and distribution in emerging economies (with inaccurate consumption data); urbanization of population (megacities); local governments' income support programs; high oil prices; production shortages (due to climate, unsustainable water usage, plagues and diseases, low prices and other factors); dollar devaluation and investment funds speculation.

It is not difficult to anticipate another food crisis, since we are facing a new era in consumption. Just to illustrate, global consumption of wheat is growing (three years average) by 10 million tons per year, corn almost 30 million tons per year and soya by 20 million tons per year. Meat consumption increased by almost 20% in nine years. In essence, people are having access to food.

Food commodities prices rose by 40% in one year, and nonfood commodities by almost 94%. This price increase is bringing back inflation, hunger and political disturbances in some developing countries where the population spends 30–50% of their incomes with food and are net importers of oil.

And where does President Sarkozy come into this story? As the G20 leader, he is worried about the rising food prices and proposed a strategy for the G20 to intervene in some way, trying to lower the prices, with more regulation for financial markets

* First published in *China Daily* (February 9, 2011).

of commodities and even building global stocks. We must remember that food commodities chains face all types of interventions and distortions, from billions of dollars spent in subsidies, high import taxes with a historical damage to several agricultural export-based economies of developing nations. His preoccupation is very relevant, but I think we could move in another and more positive long-term direction, acting with the causes of the problem.

In the same chapter, I pointed 10 solutions to deal with the food crisis, trying to bring more equilibrium basically promoting a shock in the offer (production) and efficiency, which is a "win-win" strategy. These solutions are: sustainable horizontal expansion in food production using new available areas in South America and Africa where water is not scarce; vertical expansion to increase productivity; reduction in food taxes, other market protections and barriers that increases costs and inflate food prices for the final consumers; investment in global logistics to reduce waste and costs for food transport; usage of the best sources for biofuels production that don't compete with food chains (ethanol from sugarcane is the best example here when compared to corn for feed); investments toward a reduction in transaction costs that occur in all food chains; manufacture of cheaper and innovative sources of fertilizers (which, at present, are a high cost to farmers); sustainable supply contracts to farmers for more balanced margins allocation; spreading innovations (GMO's, nanotechnology and others) and, finally, consumer behavior changes to avoid losses and even overconsumption of food (obesity). Global politicians and strategists could expand their ideas and policies with this 10-point list.

To stimulate a policy of global stocks and controls in prices as they are proposing will make food commodities markets even more artificial. These policies were already studied by important economists of OECD, showing that the intervention did not work. Other interventions like contingencies of exports and high export taxes may have an immediate positive result to control inflation in local markets, but they produce damage in the middle term, since they all reduce farmers' incentives to increase production and productivity.

Famers for a long time suffered due to subsidies for production in some specific countries, that led to lower commodity prices and lesser incentives to grow production and promote income distribution in the world. It is now time to change. Farmers worldwide, but mostly in emerging nations and Africa, need price incentives, technology, credit and buying contracts (market access) in order to invest and increase production to a level that will be in tandem with the increasing food demand in the next 10–20 years, and help solve the food crisis.

If United Nations, FAO and the G20 are worried in the coming months with regard to food prices, let us immediately reduce taxes over food and even supplement lower-income people with a temporary governmental support and move toward these proposed 10 points of development.

We will need to double food production in 10 years, and the world has land, technology, water and farmers to do it. Let us move toward the right direction: incentives for the sustainable growth in global farm production and trade, generating welfare, inclusion and peace.

Discussion question

What is your view of this picture of the food crisis today? What is your view of the future of food business in 10-year time?

Chapter 24

Food Chains and Networks Development: A 14-Point List*

Every two years, the University of Wageningen, Netherlands hosts the International Conference on Chain and Network Management.

For me to return to Wageningen is always filled with emotions since I had a chance to live in this wonderful part of the world in 1998 and 1999 during my Ph.D. studies.

In May 2010, we had the 8th Conference, the first having been held in 1996. Around 200 researchers from 40 different countries participated in three days of discussions on developments in science and the practice of integrated vertical production chains and companies networks.

This chapter presents some of the important topics discussed and major developments needed for the future. The summary is a 14-point list that may be useful for companies, governments and academics in terms of future development and emerging topics, suggestions for policies and regulations. They can contribute to a more efficient and sustainable production system, aimed at a new era of scarce resources.

Chain design, governance and performance. Since chains compete in a global arena against each other, they should have adequate governance. Thus, contracts can lead to better performances in adding value, profit generation and distribution, costs, processes and other measures.

Chain waste. An integrated food chain generates waste in almost all its agents and phases. We also have wastage of the final products, estimated at almost 40%. Thus, waste management and reduction/re-usage is of fundamental importance in an environment pressurized by a society demanding sustainability. Integrated inventory management and collaborative logistics are among the most important developments for reducing redundancies, waste and depletion of fossil resources.

---

*First published in *China Daily* (May 31, 2010).

Food risks and chain integrated risk management. There is a need to take an integrated approach to all the increasing risks in food chains, such as contamination and financial risks. Food security should be improved and the costs of this improvement shared with all agents.

Sustainable chains and certification. Consideration must be given to land use, resources conservation, nature and biodiversity. Certification processes, value and costs are part of a larger debate.

Chain and networks impact and adaptation. We must consider how the growth impacts from an unstable environment are affecting food chains and networks.

Chain and networks legislation and regulation. Chains are transnational and deal with different governments and laws, different institutional environments, bringing complexity to their management due to permanent interventions.

Food and health communication. This point is linked with the previous topic but gains importance due to several restrictions that chains are starting to face in terms of marketing communications, due to overconsumption, obesity and marketing targeted at kids.

Climate change and chains adaptation. With higher incidences of droughts, climate unpredictability is taking us to a situation of lower production and harvests and loss of land and water, and the possibility of future migration processes.

Chain information management. Information transparency and sharing has a positive impact over chains' activities, bringing better management and performance. This also involves the design of information management systems and decision support models.

Biomass-based chains. With the growth in the use of biomass and grains to produce energy and fuel, there is a pressure over existing resources in some countries, bringing a mixture of chains and competition for resources.

Metropolitan agriculture chains. This refers to the growth of food production in metropolitan spaces and areas and its integration with modern supply chains.

Chain and network intermediaries. In a process of mapping and redesigning chains, there is no more space, in a world of giants and lower margins, for intermediaries that do not add value. These agents and companies are facing a fast exclusion movement.

Chain and network entrepreneurship and innovation. This aspect has been discussed in earlier chapters, with an extensive agenda for future work.

Chain inclusion and social innovation. An important topic that we also discussed is the capacity of chains to promote the inclusion of small holders. Table 24.1 presents a summary of the 14-Point List and some major developments needed for the future.

Table 24.1

The "Food Chain´s 14 Trends"

The 14 Point List	Major developments needed for the future
1. Chain design, governance and performance	Have an adequate governance contracts can adding value profit generation and distribution reduce costs
2. Chain waste	Management and reduction/re-usage Integrated inventory management and collaborative logistics
3. Food risks and chain integrated	Integrated approach to all the increasing risks in food chains (like contamination, financial risks, and others) Food security should be improved and the costs of this improvement shared with all agents
4. Sustainable chains and certification	Land use, resources conservation, nature and biodiversity Certification processes, value and costs
5. Chain and networks impacts and adaptation	Know how the growing impacts coming from an unstable environment are affecting food chains and networks
6. Chain and networks legislation and regulation	Deal with different governments and laws Deal with different institutional environments
7. Food and health communication	Know what restrictions that chains are starting to face in terms of marketing communications, due to over-consumption, obesity and marketing for kids
8. Climate change and chains adaptation	What to for reduce the lower production and harvests and loss of land and water
9. Chain information management	To develop information management systems and decision support models
10. Biomass based chains	Competition for resources Growth in the use of biomass and grains to produce energy and fuel
11. Metropolitan agriculture chains	Growth of food production in metropolitan spaces
12. Chain and network intermediaries	Make a process of mapping and redesigning chains and add value.
13. Chain and network entrepreneurship and innovation	Agenda for future work
14. Chain inclusion and social innovation	Promotes the inclusion of smallholders

Source: Author

Discussion question

What are the other trends you see? How would these trends affect your business?

Chapter 25

Scenario Planning for Food Chains*

This chapter shares a method for scenario planning of food and agribusiness chains. It may be useful to envision how, for instance, the coffee chain, sugar chain, poultry chain would look like in 2023 and how a company operating in this particular food chain could better position itself.

A food chain is an integrated network of companies operating in the flow of products, services, communications, payments and information required for a specific product to be built (transformed) and to reach the final consumer. An example will help to clarify: when talking about the coffee chain, we consider the agents coming from the input suppliers (fertilizers, farm machinery and others) toward the final consumer of coffee. In the middle of the chain, we have coffee farmers, coffee roasting and processing industry, distributors, supermarkets, coffee shops and other agents.

The same applies to other food or agribusiness chains like poultry, beef, soybean, sugarcane, orange juice, paper and pulp, leather, ethanol, tobacco, etc. This method based on three phases is designed to predict how the chain will look like in a certain amount of time.

Phase 1 requires a design/description of the chain to understand how it looks like and who are the participants in each of its levels.

Phase 2 would involve the vision of the future. Here we should come backwards, starting the analysis from (1) the final consumer, (2) distribution (considering retailing, wholesaling, foodservice and other channels), (3) food industry (this carries out secondary processing and more marketing activities), (4) agro-industry (primary processing level), (5) farming, and finally (6) the input suppliers. Some chains have different organizational schemes, and even may have other level of participants. However, the thinking process remains the same.

---

*First published in *China Daily* (March 1, 2012).

Some questions dealing with consumers are:

- How will the consumers look like? What will be value for them?
- How would new products affect their behavior?
- What are the trends in income (effects in developing and emerging countries)?
- Which changes will occur within the buying behavior (conscious, environment, sustainable)?
- How demographic (urban, older, lonely) trends will affect consumption? How preferences (flavors) will change?
- Will genetically modified organisms (GMOs) and other technologies be accepted by the consumers and if yes, what will be the reactions?

Some questions dealing with distribution are:

- What are the trends in retailing?
- Will retail concentration and global operation movement continue?
- What to expect from private labels?
- What will be the effects of technology and price transparency?
- What will be the policies toward supply chain (purchasing)?
- How will competition among retailers affect the chain?
- What will be the role of food service industry?

Some questions dealing with food industry are:

- What will be the speed of new product development (NPD)?
- How will consolidation look like?
- How will cost margins and profitability of product-lines look like? What will be the relationship with retailers and agro-industry?
- What are the roles of regional companies?
- Who are the new players diversifying into this market?
- What is the growth expectation for this industry?
- How to solve the logistics problems to supply the emerging markets?

Some questions dealing with agro-industry are:

- How will the industry be structured?
- Will the agroindustry be concentrated? Would the agro-industry operate in a global scale?
- What would be the client logistics and purchasing behavior?

- Who will be the new players? Where would they come from?
- What will be the degree of own production of inputs? How will operating costs and margins look like?

Some questions for future farming activities are:

- How will production be structured?
- How will concentration happen? Will it be more professional?
- Which will be the most competitive areas in the world? Which are the growing areas and declining areas?
- What will be the role of cooperatives and associations?
- Will crops be substituted in some areas?
- How will plagues and diseases will affect the chain?
- What to expect from regulation changes? How production costs will look like?

Finally, questions dealing with input industries are:

- What innovations will come to market?
- What would be movements upward the supply chain and how would they be implemented?
- How will the selling and distribution channel structure look like?
- Will the concept of offering integrated solutions for farmers be the most suitable strategy?
- What will be the stand regarding GMO?

Table 25.1 resumes the major questions to be done at each level of a particular food chain.

Phase 3 would be suggested if a *particular company* wants to use this food chain scenario built in steps 1 and 2 to have their vision of opportunities, confront challenges and learn to position itself towards this future scenario. I hope this method can contribute to chain participants and to individual companies and strategists in their planning activities.

Table 25.1

INPUTS SUPPLIERS	FARMERS	PROCESSING INDUSTRY Agro - industry	MARKETING INDUSTRY Food industry	DISTRIBUTION	FINAL CONSUMERS
What innovations will come to market?	How production will be structured?	How industry will be the structured?	Which will be the speed of New Product Development (NPD)?	What are the trends in retailing?	How will the consumer look like?
What movements upward the supply chain will be done?	How will concentration happen?	Will the agro-industry be concentrated?	How will consolidation look like?	Will retail concentration and global operation movement continue?	What will be value for them?
How will the selling and distribution channel structure look like?	Will it be more professional?	The agroindustry would operate in global scale?	How will costs margins and profitability of product-lines look like?	What to expect from private labels?	How new products can affect the market?
The concept of offering integrated solutions for farmers will be the most suitable one?	What will be the most competitive areas in the world?	How would be the logistics to the clients and purchasing behavior?	How will be the relationship with retailers and agro-industry?	Which will be the effects of technology and price transparency?	How will nectars and juice drinks look like?
How will the situation of genetic modified organism (GMO) be?	Which are the growing areas and declining areas?	Who will be new players?	What are the roles of regional companies?	Which will be the policies toward supply chain (purchasing)?	What are the trends in income?
	What will be the role of cooperatives and associations?	Where they may come from?	Who are the new players diversifying to this market?	How competition among retailers will affect the chain?	What will be the effect in developing and emerging countries?
	Crops will be substituted in some areas?	What will be the degree of own production of inputs?	Which is the growth expectation for this industry?	What will be the role of foodservice?	What changes will occur in buying behavior (conscious, environment, sustainable)?
	How plagues and diseases will affect the chain?	How will operating costs and margins look like?	How to solve the logistics problems to supply the emerging markets?		How demographic (urban, older, lonely) trends affect consumption?
	How to expect from regulation changes?				How preferences (flavors) will change?
	How production costs will look like?				How is and how will be the acceptance to GMO's and other technologies?

Discussion question

Produce a scenario planning for the chain where your company is integrated.

Chapter 26

How to Build a Strategic Plan for a Food Chain: The ChainPlan Method*

It is estimated that by 2020, food supply in the world will have to be increased by at least 50%, although the areas available for agriculture and sources of water are restricted. An efficient logistics system is still a challenge in many countries. It is difficult to predict how much biofuel will be needed since it depends on car fleets and their evolution, industrial demand, human demand, institutional environments (percentage set by governments for biofuel additions to oil) and consumer behavior. So, to deal with all the environmental changes in the national and international business arena, and growth opportunities in the food, fiber and bioenergy production chains, strategic planning should be focused on understanding these production chains.

Increasingly, it will be necessary to instill a strategic planning and management process in various agribusiness systems. In 2007, I developed the ChainPlan method for "Strategic Planning and Management of Agribusiness Systems" which has been applied to agribusiness systems in Brazil, Argentina, Uruguay and South Africa, among other countries. It consists of five stages: the initiative of systems' leaders, the mapping and quantification of the agribusiness system, the formation of a vertical organization, the plan with strategic projects, and the implementation of the plan.

The ChainPlan method is summarized in Figure 26.1, which shows a five-step process aiming at the implementation of strategic planning and management in production chains.

---

* First published in *China Daily* (August 10, 2012).

Figure 26.2 presents the details of step 4 of the ChainPlan Method. This step is divided into 12 stages, with an attempt to design an integrated strategic plan for the agribusiness system in the following 5 or 10 years.

Each stage is elaborated on in the guidelines presented in Table 26.1.

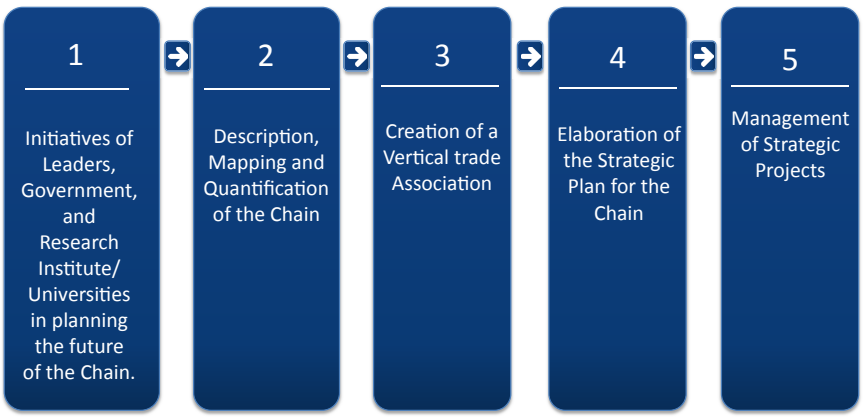


Figure 26.1. The ChainPlan method for strategic planning and management of chains

Source: Neves (2007).

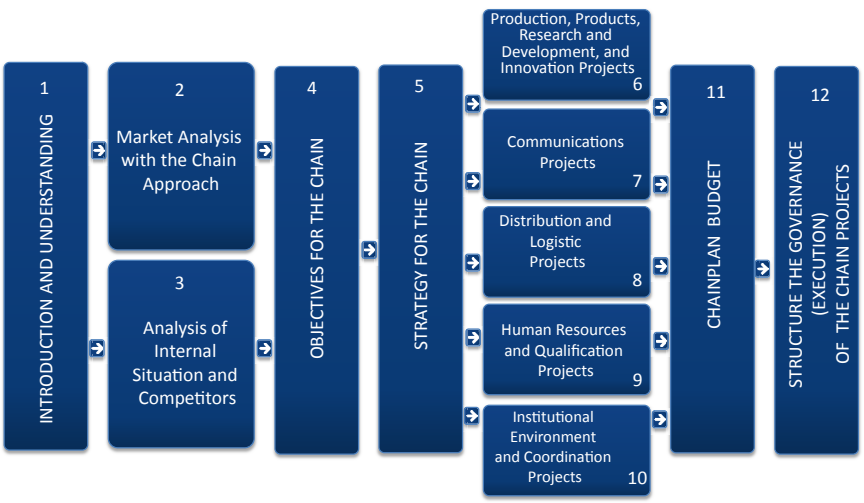


Figure 26.2. Sumary of ChainPlan Plan (step 4).

Source: Neves (2007).

Table 26.1

Guidelines for demand-driven strategic planning and management of the chain

Phase 01 - Introductory

Stage	What has to be done
1. Introduction And Understanding	✓ Verify if the chain has other plans made and to study them; ✓ Verify which teams will take part in the process; ✓ Study plans made for production chains in other countries, for benchmarking; ✓ To identify a member of the team who could promote relationships with other chains; ✓ Finally, in the case of chains with sophisticated planning processes it must be verified how this model can help the existing model, and how to adapt, gradually, the chain to this one.
2. Market Analysis with a Chain Approach	✓ Understand the chain participants and industries involved; ✓ Analyse the major numbers; ✓ Address threats and opportunities coming from the legal/political, economic/natural, socio-cultural and technological environments; ✓ Understand trading barriers (tariff and non-tariff); ✓ Map chain uncertainties; ✓ Value creation and capture possibilities; ✓ Produce a scenario analysis for each chain participant; ✓ Analyze consumer trends and behavior; ✓ Map the buying decision process; ✓ List worldwide sources of useful information; ✓ Map most important events and other meetings where the future trends are discussed
3. Analysis of Internal Situation and Competitors	✓ Identify all the strong and weak points of the chain; ✓ Map chain contracts and other existing forms of coordination; ✓ Describe the existing structures of associations (collective actions) ✓ Analysis of major competitors: structure, numbers, growth, and other information from competing countries; ✓ To analyze the critical success factors of the chain; ✓ Select national and international benchmarks
4. Objectives for the Chain	✓ To define and quantify the major chain objectives in terms of production, exports, imports, and other financial indicators
5. Strategies for the Chain	✓ List the major strategies (action) that will be used to reach the considered objectives in item 4 in terms of positioning, exports, value capture, and market segmentation.

(*Continued*)

Table 26.1 (*Continued*)

Phase 2 - Plans of Strategic Vectors: Production, Communication, Distribution Channels, Qualification and Coordinator (Institutional Adequacy)	
Stage	What has to be done
6. Production, Products, R&D, and Innovations Projects	✓ Analyze productive potentials and production capacities; ✓ Map and plan for production risks (sanitary and others); ✓ Products and product lines, as well as complementary product lines ✓ for expansion decisions; ✓ Innovation opportunities and in the launch of new products; ✓ Settle national and international innovation networks; ✓ University partnerships and with medical (health, nutrition) and cosmetics areas; ✓ Understand current and potential services to be offered; ✓ Joint construction of brands and other brand strategies; ✓ Labeling opportunities; ✓ Certification processes for the chain; ✓ Environmental sustainability; ✓ To make packaging-related decisions (labels, materials, design);
7. Communication Projects	✓ Identify the target audience for the communication (messages from the ✓ production chain); ✓ Develop goals for this communication (product knowledge, product reminders, ✓ persuasion, among others); ✓ Search for an unique positioning and message; ✓ Define the communication tools as advertising or public relations, amongst others that can be used. ✓ Develop a strong platform for new media communications; ✓ Review communication actions and determine the annual budget involving all the network agents; ✓ Indicate how communications results will be measured so that the chain learns ✓ more and more about the best tools to achieve revenue on investments.
8. Logistic and Distribution Projects (Including Exports)	✓ Analyze the product distribution channels and to search for new ones; ✓ Analyze the possibilities of value capture in the distribution channels; ✓ Identify possible demands of international traders and consumers ✓ to suit the existing services; ✓ Define new ways to enter the markets (through franchising, joint ventures ✓ and other contractual forms, or through vertical integration); ✓ Determine annual budget for distribution; ✓ Verify how distribution actions can be done together with other chains.
9. Human Resources Projects	✓ Training in management for the chain participants; ✓ Training in cost controls and use of technologies; ✓ Training in national and international sales; ✓ Extension and knowledge dissemination; ✓ Network of technical assistance to improve yields; ✓ Others.
10. Institutional Environment and Coordination Projects	✓ Projects to finance the chain; ✓ Basic infrastructure improvement projects; ✓ Increase consumption in government (food aid and others) programs; ✓ Special development programs for sensitive areas and chain participants; ✓ Tax reductions in the production chain project; ✓ To strengthen export activity through export promotion agencies; ✓ Special programs for the use of technologies (fiscal incentives, lower rates and others); ✓ Facilitate standardization projects; ✓ Promote transparency; ✓ To develop proposals for chain conflict solutions.
11. ChainPlan Budget	✓ Budget for every project and total plan budget.
12. Strategic Projects Consolidation	✓ All projects generated in steps 6 to 10 will be consolidated and priorities will be settled based on budget constraints and others

Discussion question

What would be the strategic plan for the chain that your business is integrated with? In your view which would be the most important projects?

Chapter 37

Food Companies' Strategies in the Network Era*

In this chapter, I want to list some of the most important strategies for competition in the coming years, which I consider the "network era", applicable to companies operating in food markets and other markets in the food supply chain (see Figure 37.1).

The first relates to the ***integrated network approach***. As already written in the previous chapter and repeated here, all companies must understand that they are not isolated any longer. They operate in a complex network, interacting with suppliers, buyers, consumers, competitors, government and other agents. Companies are a bundle of contracts of all sorts, types and ages. The first step for an executive is to describe and draw up this complex network on paper, and then expand it, so all employees in the company appreciate the overview of its activities, showing that they are not isolated. What happens in the external environment affects the company. If something happens to a buyer or to a supplier, the company is also affected. We must all stay alert, pay attention to events around us and anticipate events that may happen and how the company might be affected.

The second strategy relates to ***supply chain optimization***. Companies need to constantly look at their supply chains to reduce costs, buy from the best available sources from all over, and try to find products or ingredient substitutes as well as testing quality and adaptability to see if the product fits their criteria. A source of losses in the supply chain has to do with inventories. There is a need to establish safe, secure and continuous supply chains, in order to minimize inventories and losses due to transport inefficiencies and redundancies, which also reduce transaction costs. Companies need to think in terms of rationalizing packaging costs and seek alternatives. Always ask "How can we do this better?"

---

*First published in *China Daily* (November 6, 2009).

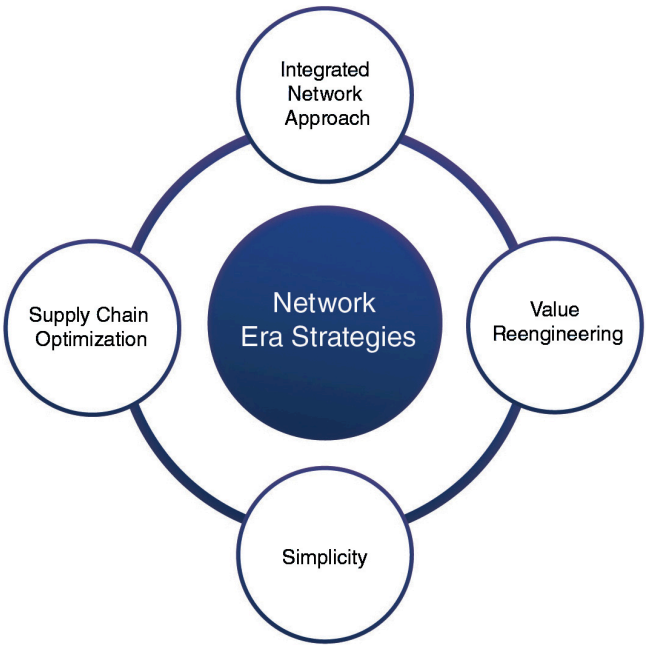


Figure 37.1 Networks era strategies.

In times of compressed margins and global competition, a third bundle of strategies deals with ***marketing***. Companies have to do what I call ***value re-engineering***, which means evaluating your product line with a lens on "how to capture more value." Companies should reconsider their marketing jargons and how to make them more effective, whether packaging and the related description should be modified, and so on. When launching new products, companies should have a clear focus, a message content that is easy to understand, and conduct as much research as possible to avoid risks of failure. Margins today are shrinking, and therefore, cannot be used to compensate for failed launches. Margins from existing products should not be diverted to supply funds to support failures with regard to new launches.

In marketing, ***simplicity*** is the buzz word in this new era. Companies should simplify market segments, give more attention to cash generating products and have a very clear consumer focus. Communications (advertisement and others) should be carried out with a deep understanding of its potential costs and impacts. There is no time any more for media exposure without a clear understanding of the return in terms of value that a company is receiving from its investments.

It is a new era of understanding the behavior of consumers, and more importantly, understanding that the consumer does not want to pay for your inefficiencies over the supply chain and inefficiencies in companies' marketing activities.

Table 37.1

Integrated Strategies for Competition

Integrated Strategies for Competition	Important Topics
1 - Integrated Network Approach	✓ Companies are not isolated; ✓ They operate in a complex network, interacting with suppliers, buyers, consumers, competitors, government and other agents; ✓ What happens in the external environment affects the company.
2 - Supply Chain Optimization	✓ Companies need to look at their supply chains to try to reduce costs; ✓ Try to find substitute products or ingredients that fits their criteria; ✓ To establish safe, secure and continuous supply chains; ✓ Minimize inventories and losses due to transport inefficiencies and redundancies; ✓ Think in terms of rationalizing packaging costs.
3 - Marketing (value re-engineering and simplicity	✓ Companies have to be looking at their product line with a perspective of "how to capture more value"; ✓ Companies should have a clear target when they launch a new product; ✓ "Simplicity" is the word for the new era; ✓ Have a very clear consumer focus; communications (advertisement and others) should be done with a deep understanding of its costs and impacts.

Discussion question

How can you improve the activities of your company based on the three major strategies (using Table 37.1)?

Chapter 42

The Macro-environment and Risk Analysis*

This chapter aims to share a framework that has been used in our projects when doing a scenario analysis for a company or an industry. It tries to contribute with a discussion about risks that could endanger either the world's business environment or a particular country affecting a market that is of importance to a focal company.

We perform this analysis by using the traditional and consolidated PEST framework, dividing the variables into the global political–legal system, global economic and natural system, global socio-cultural system and finally, the global technology system. The major variables that we forecast are described in the following list. It is not a definitive list, but may contribute with some analytical points.

Starting with risks associated with the global political–legal system, we tend to consider:

- Risks to democracy in some countries
- Populist measures of some governments and their impact in social expenditures
- Risks of government takeover by political parties causing federal overemployment
- Risks of terrorist and political attacks using food or other sources
- Risks of global arming (even atomic) procedures and weapons availability
- Risks of riots and other challenging political systems
- Risks of increase in corruption within political systems
- Risks of labor laws decreasing work productivity and increasing costs and strikes
- Risks of the growth of illegal crime systems and parallel states (drug cartels, nonillicit trade groups and others)
- Risks of declining support to world's organizations and institutions (World Bank, ONU, FAO,.)

*First published in *China Daily* (March 20, 2013).

- Risks of immigration and also migration to urban areas threatening infrastructure
- Others

Within the economic and natural system, we tend to consider as a starting list:

- Fiscal debt crisis in some countries
- Inflation threats in some economies
- Risks of a insufficient economic growth mostly in poor and emerging economies thus pressurizing governments
- Risks of supply chain inefficiencies (poor land use and other resources)
- Risks of infrastructure collapse
- Risks of financial systems inefficiencies, failures and lack of financing capital
- Spread of diseases in humans, animal or plants, that are difficult to cure
- Risks of over usage of nonrenewable resources (oil, some fertilizers)
- Water shortages and excess causing droughts and flooding (disasters)
- Risks of temperature changes in some regions, with extreme situations
- Risks of increasing carbon emissions and its effects over pollution
- Risks of potable water availability
- Risks to the planet based on asteroids collision and other threats
- Food safety risks due to poor management of food supply chains
- Natural risks of earthquakes, tsunamis, hurricanes and other extreme events

Within the socio-cultural system, we tend to consider as points of attention:

- Rapid changes in consumption behavior
- Risks of consumerist movements
- Risks of environmental movements
- Risks of nationalistic movements
- Risks of food security concerns increasing inefficiencies in non adequate producing areas
- Food waste concerns
- Risks of nontolerance in some aggressive religious movements
- Risks of increase in xenophobic movements
- Others based on socio-cultural variables

Finally, within the global technological system, we tend to consider:

- Risks in digital systems operations (web-based companies' operational systems and government systems)
- Risks in data thefts, data frauds and advances over personal intimacy
- Risks in viral communication exposure of individuals, companies and governments
- Risks of not controlling new high tech innovations, such as genetically modified, nanotech and others that may get out of control
- Others based on technology.

Table 42.1

Political-Legal	Economic-Natural
➔ Risks to democracy in some countries; ➔ Populist measures of some Governments and its impact in social expenditures; ➔ Risks of Government takeover by political parties causing federal overemployment; ➔ Risks of terrorists and political attacks using food or other sources; ➔ Risks of global arming (even atomic) procedures and weapons availability; ➔ Risks of riots and other challenging political systems; ➔ Risks of increase in corruption within political systems; ➔ Risks of labor laws decreasing work productivity and increasing costs and strikes; ➔ Risks of the growth of illegal crime systems and parallel states (drug cartels, non licit trade groups and others); ➔ Risks of declining support to world's organizations and institutions (World Bank, ONU, FAO…); ➔ Risks of immigration and also migration to urban areas threatening infrastructure; ➔ Others.	➔ Fiscal debt crisis in some countries; ➔ Inflation threats in some economies; ➔ Risks of a not sufficient economic growth mostly in poor and emerging economies pressuring Governments; ➔ Risks of supply chain inefficiencies (bad land use and other resources); ➔ Risks of infrastructure collapse; ➔ Risks of financial systems inefficiencies, failures and lack of financing capital; ➔ Hard controlling diseases spreading in human, animal or plants; ➔ Risks of over usage of non-renewable resources (oil, some fertilizers); ➔ Water shortages and excess causing droughts and flooding (disasters); ➔ Risks of temperature changes in some regions, with extreme situations; ➔ Risks of increasing carbon emissions and its effects over pollution; ➔ Risks of potable water availability; ➔ Risks to the planet based on asteroids collision and other threats; ➔ Food safety risks due to poor management of food supply chains; ➔ Natural risks of earthquakes, tsunamis, hurricanes and other extreme events.

Socio-Cultural	Technological
➔ Fast changes in consumption behavior; ➔ Risks of consumerist movements; ➔ Risks of environmental movements; ➔ Risks of nationalistic movements; ➔ Risks of food security concerns increasing inefficiencies in non adequate producing areas; ➔ Food waste concerns; ➔ Risks of non-tolerance in some aggressive religious movements; ➔ Risks of increase in xenophobic movements; ➔ Others based on socio-cultural variables.	➔ Risks in digital systems operation (web based companies operational systems and Government systems); ➔ Risks in data stealing, data frauds and advances over personal intimacy; ➔ Risks in viral communication exposure of individuals, companies and Governments; ➔ Risks of not controlling new high tech innovations, such as genetically modified, nanotech and others that may get out of control; ➔ Others based on technology.

Discussion question

Based on the risks discussed in this chapter, the questions are: What are the possibilities of these macro-environmental variables happening in your company, and if they happen, how would they affect the company. Are there acts (projects) to adapt to this changing environment?

Chapter 51

"Go to Market" Strategies in Emerging Countries*

This chapter proposes some specific strategies to enter and conquer the emerging markets. These markets are booming nowadays and if any company wants to grow in the global arena, it should participate and capture the growth of emerging countries. In the developed countries, companies could consider merging, acquiring or conquering market share of competitors, since in these regions most of the markets are not growing. Some characteristics of these markets are listed here to help companies with decision-making.

1 Emerging markets cannot be generalized. A deep understanding of each market is necessary. Countries differ. Just as an example, China, Brazil and India are real "continents" and differ depending on each specific region, urban or rural areas, and cultural background. Imagine generalizing Africa, what a huge mistake it would be.
2 As opposite to developed markets, securing information in emerging economies is difficult due to a lack of reliable data, official statistics and other sources. So, companies desirous of entering emerging economies may need to build own sources to find relevant information and knowledge. This is a unique characteristic.
3 Bartering systems (exchange of goods) may be a strategy to finance and avoid risks of default in payments or not receiving at all, due to the lower levels of income, higher inflationary trends and different business models in several emerging economies.

*First published in *China Daily* (November 2, 2012).

4 Marketing channels in emerging economies are very unique, involving several distributors that are very different in the way they do business and perform services. Sometimes it is a chaotic system, difficult to understand and measure. At the same time, the presence of modern retail systems makes a very diverse and dual system. Several variations within each country are also found. A segmentation process should be carried out using this variable and a clear multi-channel approach (in product and services) should be established by the company.
5 Adapting to family businesses and family managed distribution systems is needed. They tend to respond differently to the company offer, asking for more services and financial benefits than for discounts, the basic demand of large multinational retailers.
6 A motivated sales force that uses modern technology for data generation and analysis should be used to build information about the market and target the very different market segments.
7 Companies should try to select after due diligence and build trust with distributors in order to establish entry barriers for latecomers in these markets.
8 The issue of human resources is critical. Emerging countries are experiencing a fast rate of economic growth, and job opportunities are booming within competitors and elsewhere. So a strategy to attract and retain talent is fundamental. Sharing participation in the company may be a good retaining strategy.
9 Competition should be treated in a different way, since new competitors may come into these markets faster than in consolidated markets. Local competitors are more adapted to local situation and offer huge competition, since they know the rules of the game, the so-called "how to play."
10 Acquisition of local companies may be a strategy to acquire resources such as people and market knowledge, but investing company should always consider cultural aspects when taking over management of local company. A lot of mistakes and bad cases can be reported here.
11 It is recommended that companies desirous of entering emerging markets contract the services of local experts to understand the regulatory systems, since these are complicated and are best understood by the locals. Also, the institutional environment in some countries is weak, rendering justice slow and expensive. Sometimes, institutional or governmental restrictions of the new markets would mandatorily require entering only via joint ventures and/or with local partners.
12 Adapting product lines to local logistic systems is needed. In several markets, refrigerated transportation systems and structures are not available.
13 Find the right media to communicate with possible consumers, since effective ways to advertise may vary. Local sources of media may be available that may be more effective.

14 Focusing in the growing segment of food services in emerging cities may be a nice strategy to enter, popularize these products among consumers, and then approach retail by which time demand would have been already created by this strategy.
15 Avoid starting a strategy to capture all the existing markets, since the complexities are huge and the investing company may lose focus. Focusing in target segments is a key resource for avoiding major pitfalls.
16 Manuals describing various procedures are necessary owing to mismatch in the education levels and also to enable companies to train their new human resources in a faster way than competitors. These rulebooks could be used to accomplish training faster which in turn would ensure employee retention.
17 Investing in emerging economies may require investments that are not part of original plans, such as infrastructure, local communities benefits, corporate social responsibility programs and others.

The challenge is set. To grow today in the global arena will be very difficult without playing the game with emerging economies. And the difficulties are immense, so are the opportunities. It is the decade of the emerging economies.

Discussion question

In your view, which among these 17 points emerge as the five most important?

Part 4

International Investments & Role of Governments

Chapter 61

Building a Strategy for International Investments in Food and Agribusiness*

I have four objectives in dealing with international investments: (1) raise the "good and bad" points, (2) address the need for a country/regional strategy, (3) address the need for companies to globalize and search the world for opportunities and (4) elucidate the role of government.

There is still a debate as to whether receiving international investments is good or not for a particular country or region. We should not advocate for one side or the other, but obtain all points of view and then perform an analysis. International investments do have their advantages, as discussed in the previous chapters, if they promote development, by bringing access to international markets and expanding the export capacity of the country, creating jobs and generating taxes for governments, bringing knowledge to a country, bringing credit and instilling confidence, among other things, to a country. If a country receives international investments from a world class company, it is an endorsement for development and other investors.

The major objections that I received from opponents of international investments were linked to expatriation of resources from countries, exploitation of these resources until their depletion and exclusion of the possibility of future generations of that country using them in the future, taking profits away from local economies and bringing cultural shocks and changes to local communities. Others fear the damage to competition in a country, due to the global capacity of a multinational company that can even promote dumping on local markets, compensated by good results in other countries, in order to destroy local competition. This may bring exclusion of local companies in the long term. There are also some nationalist feelings, that

* First published in *China Daily* (May 6, 2010).

only products produced in the country, by a local company, are good for the local society. These points should be considered.

In my view, with a good strategy and a good regulation system, a country can try to avoid these pitfalls, maximizing the benefits of these investments. The first criterion for any country and government would be a good strategy, a strategic plan for the country, looking 10 to 20 years ahead, which I see as a not-so-common thinking of governments. Only with a good strategy, it is possible to attract a country or a region, companies that are linked to the potentialities of the region, with expertise, with guaranteed demand (international contracts), clean production systems, high technology (biotech/nanotech), and also assurances that units of research and development and part of the headquarters of these companies would be based in the country that is receiving this investment.

Let me at this point give you the example of Brazil, a country that is experiencing huge inflows of international investment, major economic growth and income distribution, putting pressure on infrastructure, and booming internal markets. Brazil will also host two major events that companies could be taking advantage of: World Soccer Cup in 2014 and the Olympic Games in 2016. A good strategy would be to attract investments from international companies that would immediately fit in with conditions of the country and its opportunities. There would be Spanish, American, Asian and other chains (like Melia, Hilton, Sheraton, Shangri-La) introducing and expanding their networks of hotels (business); investments in entertainment (arenas, parks, museums); companies wanting to produce energy and infrastructure logistics (roads, trains, airports and duties); airline companies (now allowed to make up 49% of local companies' shares since it is one of the fastest growing markets), construction investors to build second homes for the retired Europeans visiting the year-round sunny northeast beaches of Brazil (a six-hour flight from Europe), and in universities, a booming sector due to demand in education. There is also room for investments in food, like New Zealand milk farmers wanting to expand globally, Belgian chocolate companies, Australian/Uruguayan sheep farmers and slaughterhouses. These are just a few examples to point out some areas where a strategy would fit.

But all countries and respective governments, when going to international markets to attract investments, should do their homework or the basics of the basics. These basic criteria should include: stable economy (growth, low inflation, interest rates, internal demand); good human resources and talents; reasonable and competitive infrastructure, security for people, reasonable tax and financial systems, good governance with austerity or simplicity to facilitate better management (get rid of bureaucracy, which is mostly associated with corruption). A country also has to offer basic resources (energy, land, sun, water), capable suppliers and distributors, and institutions (judiciary system) that are trustworthy and able to speedily resolve problems and disputes. This homework, together with a capable strategy, strong regulation systems and simplicity will create the right environment for international investments to come in and promote sustainable development.

Table 61.1

A Strategy for International Investments.

OBJECTIVES	STRATEGIES
1. Raise these "good and bad" points	
2. Address the need of a country/region strategy	
3. The need of companies to seek the world for opportunities	
4. The role of Government	

Source: Author.

Discussion question

What are your views towards international investments? List opportunities that could arise for your company.

Chapter 62

How to Promote and Regulate International Investments in Food and Agribusiness?*

There is plenty of knowledge available about the possible benefits of international investments to an economy. In this chapter, I will deliberate the issue of building an institutional arrangement in a country that is desirous of seeking international investments, since they may have both positive and negative impacts. Considering this, certain regulations are important to avoid negative impacts from transnational companies' investments, and to enhance the positive effects of these foreign direct investments.

There are eight major topics that should be studied and covered by public policies. The objective here is to facilitate local, state or even federal governments and agencies in setting up a framework where international investments can be attracted to promote development and avoid possible negative externalities.

The first one relates to the governance structure of the investments. Here, we may consider the wide range of possible investments (joint-ventures, vertical integration, franchisees), money entrance conditions, promotion policies to receive these investments, safeguards for risk protection (invasion, expropriation, fees, etc.) and other considerations. Some questions would need to be deliberated: How will direct investment take place? What types of assets ownership (land, industry and others) must be considered and planned? How will the stimulus package for these investments (like energy supply, logistics and other related to infrastructure) be built? and finally, How to remove the existing obstacles to attract investments?

The second topic relates to environmental protection, focusing on policies of water usage, agricultural practices (soil conservation, harvesting, among others), policies on pollution control, sanitary measures, international standards and certifications that will be required and, finally policies regarding conservation and rights over the country's

* First published in *China Daily* (March 10, 2010).

biodiversity. Some companies are accused of not having the same environmental practices they have at home, and this should be avoided by means of suitable policies.

The third topic deals with the regulation of human resources. These regulations may include salaries, labor and wages, benefits, working conditions, corporate social responsibility, ethics and codes of conduct and community relations. This is one of the most important topics, since most problems with international investments that occurred in the past were due to mismanagement of human resources.

Taxation policies (taxes) is the fourth topic that must be defined for transnational investments. Questions regarding the structure of taxes and tax policies, export tax policies, purchase and compensation taxes and possible temporary government tax incentives for the investment to be made, or to be stimulated, are the focus of our analysis here.

As the fifth topic, we have research and development policies. At this point, the most relevant would be a kind of stimulus to improve development of local knowledge and R&D. Property rights, licensing contracts and royalties must be discussed. Stimulus for linkages with local research organizations and institutions can be an important incentive to integrate and promote development.

The sixth topic is related to investments in agricultural or agribusiness, and deals with joint actions for farmers and industry. It is important to have policies stimulating the linkage of international investments to local organizations, an incentive for the formation and sustainability of cooperatives and associations, induction for farmers, co-ops and organizations to build sustainable relationships with the international investors, and incentives for building sustainable supply contracts. It could be important also to establish a framework for resolving disputes and even private arbitration.

The seventh topic relates to financing and credit involving discussions and implementation of policies that allow international investors to access public sources of financing, state banks and public credit lines. Such credit offers may be linked to the technology of the international investor and ensures possibility of growth.

Finally, the last topic relates to policies regarding market access. In each of these policies, there are suggestions of incentives for international investments. These may include government purchase of products generated by the investment and facilitating local access to investors, international agreements for market access to improve export channels of this new entrant and general competition policies. In food investments, it is also important to evaluate and promote food safety policies to facilitate international market access.

The relevance of studies in international investments for food production is of fundamental importance. It is well known that food production needs to be enhanced and in order to accomplish these needs, international investments are of fundamental importance. At a time when countries are establishing policies regarding food security, with governmental and private funds being allocated to buy land abroad and secure food supply, the role of these investments increase in importance. This chapter provides governments, agencies and companies involved with international investments with a list of eight major topics (see Table 62.1) that must be considered for regulation of these investments in order to bring as much sustainable economic development as possible.

Table 62.1

Suggestions for public policies regarding foreign investments in agribusiness	
8 major topics	Suggestions for Public Policies and Incentives to International Investments in Agribusiness
Governance Structure	→ How direct investment will take place and sorts of assets ownership (land, industry and others); → Entrance conditions of resources (money flows); → What the promotion policies for FDI will be; → What the safeguards for the protection against risks (invasion, expropriation, fees, etc) will be; → What the stimulus package for investments (energy, logistics and other related to infrastructure) will be and how to remove obstacles to attract investments.
Environmental Protection	→ Policies on water use; → Policies on agricultural practices (soil conservation, harvesting, among others); → International standards and certifications that will be → required; → Policies on pollution control; Sanitary policies; → Policies on conservation and rights over biodiversity.
Human Resources (people and labor)	→ Rural labor and wages; → Working conditions; → Benefits; → Community relations; → Child labor; → Corporate social responsibility; → Ethics and codes of conduct; → International labor.
Taxation	→ Structure and tax policies; → Export and tax policies; → Purchase and compensation taxes; → Temporary tax incentives.
R&D (Science and Technology)	→ Development of local knowledge and incentives for local development of R&D; → Property rights and other protection forms, licensing contracts and royalties; → Linkages with local organizations/institutions as an incentive.
Joint Actions for Farmers and Suppliers under Contract (Commitment)	→ Linkages to local organizations; → Incentives for co-ops/associations formation and sustainability; → Prepare farmers/co-ops/organizations for the relationships; → Sustainable supply contracts; → Dispute mechanisms and private arbitration.
Financing and Public Resources	→ Access to public sources of financing; → Access to state banks and credit lines.
Policies on Market Access	→ Government purchasing policies and access to investors; → International agreements for market access; → General competition policies; → Food safety policies for market access.

Source: Author

Discussion question

Which are the most relevant regulations in the list and how would they affect your company?

Chapter 63

How to Evaluate International Investments' Capacity to Promote Economic Development?*

In this chapter, I want to talk about the importance of receiving international investments for all nations, but mostly for developing nations, and try to point out a gap in the usual analysis. What gap?

Local or federal governments and other institutions sometimes have difficulties in evaluating the capacity of an international investment in promoting economic development. This can also make it difficult for governments to define a specific benefit or support to be derived from this international investor company, or to convince the local community of those benefits for developing the region, moving the economy forward, generating jobs and exports, and other benefits.

When a transnational company (TNC) comes to a country, it normally comes with several types of resources, not only financial. We will analyze these resources. I want to categorize these resources on a list of six points in order to assist governments in evaluating international investments in a country. The better the investor can perform on this list of resources, the better these investments will be. This is based on several discussions I had in 2009 at Geneva, on a UNCTAD/ONU project. This list is different, however, since it looks also at the local supply chain of a company. If a company can build a strong integrated supply chain, there is a greater possibility for more economic development. The six topics, with their own sub-topics, are given below. It will help the reader in understanding the concepts — you may imagine an international food industry investing in a new country.

1. Financial Investments and Expertise — Here, we may consider the amount of money that will be invested, and in relation to the investments, whether

* First published in *China Daily* (February 21, 2010).

the company can provide capital, open credit lines giving the needed guarantees for suppliers (for instance, local farmers), gain access to government official credit, has knowledge of credit operations and bureaucracy, has access to international credit and generates a good reputation for the region and the country. We should also look at the capacity for generating the benefits of foreign currency through increased exports and finally, the amount of employment generation.

2. Capacity to Provide Technical Assistance — Normally, a TNC has a "how to do package" for its suppliers, helping with farm support, support of sustainability policies and sustainable practices, participate in activities of research and development, support to achieve standards (ISO, etc.) and transferring of skills that will promote economic development.

3. Sourcing of Input Supplies to Farmers — TNC food companies can help farmers by providing them with uptodate seeds, machinery, genetics, fertilizers and chemicals, helping them to produce with the most recent technology.

4. Management Assistance and Service Provisions — This refers to evaluating the capacity of TNCs to deploy economical/financial controls to assist farmers and suppliers through training and farming management, transportation and storage, communication skills and certification. TNCs could also render support the demands for public investments in logistics and infrastructure in that country or region.

5. Capacity to Provide Market Access — This is one of the most important concepts. A TNC could arrange international sales contracts, providing access to marketing channels, access to niche markets — organic/fair trade/others, providing information on market trends, helping farmers decide what to grow, and enabling reduction on price volatility through long term contracts.

6. Farmers' and Suppliers' Organizations — This is the last concept, one not usually considered or evaluated. I think a TNC should also be evaluated by its capacity to help farmers or suppliers in building what is called "countervailing power", to reduce power imbalances in modern food production chains, although this may sound impractical. This can be achieved by stimulating the establishment of local organizations, stimulating the arrangement of cooperatives, building networks of local producers and incentives for cooperation. It is not easy, but I consider "inclusion" to be one of the most important words for the next 10 years!

Finally, the relevance of studies on TNCs involvement in food, agri-business and agriculture is of fundamental importance. Food production needs to be enhanced in order to accomplish these needs. At a time when countries are establishing policies regarding food security, with government and private funds allocated to buy land abroad and secure food supply, the role of TNCs increases in importance. There are several lessons to be learned by developing nations trying to attract international

Table 63.1

Impact of TNCs on local community

Resources of TNCs	Impacts on Local Community
Financial Investments and Expertise	➔ Providing investments (capital); ➔ Opening credit lines giving the needed guarantees for farmers; ➔ Access to government official credit; ➔ Knowledge of credit operations and bureaucracy; ➔ Access to international credit; ➔ Inward investments contribute to a good reputation for the region and the country; ➔ Foreign currency generation through the increase of exports; ➔ Employment generation.
Input Supply to Farmers	➔ Seeds; ➔ Machinery; ➔ Genetics; ➔ Fertilizers and chemicals.
Technical Assistance	➔ "How to do package"; ➔ On farm support; ➔ Support on sustainability policies and sustainable practices; ➔ Execution of research and development; ➔ Support on standards (ISO, etc.) ➔ Transferring of skills; ➔ Supply of higher standard products within the internal market.
Management Assistance and Service Provisions	➔ Assistance on economical/financial controls; ➔ Training and farming management; ➔ Transportation and storage; ➔ Communication; ➔ Certification; ➔ Results/profit of the farm; ➔ Support to demands on public investments in logistics and infrastructure.
Market Access	➔ Arranging sale contracts; ➔ Providing access to marketing channels; ➔ Access to niche markets – organic/fair trade/others; ➔ Providing information on market trends, helping farmers decide what to grow, and enabling reduction on price volatility.
Farmers' Organizations	➔ Establishment of local organizations; ➔ Stimulating the arrangement of cooperatives; ➔ Networks of local producers; ➔ Incentives to cooperation.

Source: Author.

investments, in agriculture, industry or other fields. Table 63.1 summarizes the potential impact of TNCs on local communities.

Discussion question

Which are the most important impacts brought by international investments?

Chapter 64

Land for Free... Is This Possible for Food Companies? The CODEVASF Case*

We all know about the need to increase food production, to face the incredible development of emerging markets and new consumers, and the scarcity of land and natural resources available in the world to face this challenge.

In this chapter, I want to comment on one of the most impressive ideas for regional development, discussed at one of the renowned Harvard Seminars. This is the case of Codevasf, a company owned by Brazilian government, and dedicated to the development of the semi-arid Sao Francisco and Parnaiba River Valleys, in the northeast of Brazil. This company has come up with a different concept of land occupation and regional development.

First, let me introduce the reader to these two valleys. They have around 960,000 km2, with an irrigated land potential of 360,000 ha, in the Sao Francisco Valley alone. In 2010, 120,000 ha were implemented by Codevasf, with 50% being used by 100 companies, mostly for fruit production and some processing (dried fruit, juices and wine). This area is responsible for US$ 300 million exports per year (40% of total Brazilian fresh fruit exports, and 100% of Brazilian mango and grapes export). It has around 2,800 hours of sunshine, which allows year-round crop production, with enough fresh water for irrigation, and good transportation and connections. The average temperature is 25–30°C, with a well-defined rainfall. These specific conditions allow producers to take advantage of market windows for fruit exports.

Over the past 40 years, Codevasf has built 28 irrigation projects. In the past, Codevasf purchased nonimproved land, built infrastructure (roads, energy,

*Harvard Business Shool (2010). First published in *China Daily* (February 11, 2010).

administration) and irrigation systems (canals and pumps), divided the land in areas from 5 to 200 ha lots for investors, attracted farmers, made water and energy available. Codevasf also charged fees based on the lot size, to cover operations and maintenance and the producer paid energy fees to the energy supplier. After the land was occupied and the project was ready, Codevasf transferred responsibility for operations and maintenance to an association of producers, named District.

So why did this old model fail, resulting in more than 50% of the land standing idle? Mostly because it was production-driven, and not market-oriented or demand-driven. Some factors that caused failure include: lack of marketing, excess production, low prices, lack of coordination, lack of innovation, products only directed for local consumption, subsistence farming by some producers, opportunistic intermediaries paying low prices to farmers, lack of scale, bad selection of producers and complicated proprietary issues. As a consequence, the yield from taxes was nil, there was no economic development and no return for all the investment made in the region by government.

In 2010, after five years of working together with the World Bank and the University of São Paulo, Codevasf has proposed a new concept. This concept already has an approved invitation to bid, and the auction is expected to be held in 2010. (For more information, see www.pontal.org.)

The Brazilian government wants a consortium company (this can be an engineering company plus a food processor) to occupy the area. This consortium will receive the land for free, and within six years, it has to finish constructing the common irrigation infrastructure (US$50 million, which will be reimbursed by government), and establish agricultural operations in all 8,000 ha. It will be responsible for the Pontal water supply and its operation and management (estimated costs of US$3.8 million/year, also reimbursed), and install one or more anchor companies (food producers), and other new concepts: this anchor food company should have a minimum of 25% of the land (2,000 ha) occupied by local farmers (suppliers), selected among 1,500 farmers listed by Codevasf, with a maximum area of 20 ha each.

This food anchor company should be demand-driven and have coordination capacity. The government expects it provide training to the farmers and have financial capacity. The company should also be able to face market risks, have capacity to deal with a diversity of fruits and processed foods.

The Pontal project has 30,000 ha of total area, 8,000 ha being irrigable. It will have a huge impact since it will be the first PPP of the Lula government and will set the framework for another 500,000 hectares. The objective is sustainable agricultural production, facilitating regional economic development. The land will be granted for 25 years, plus preference for a further 25 years. The greater the number of integrated farmers (suppliers) offered by the consortium and the anchor company, the greater is the chance to win the bid and get this 8,000 ha irrigated land for free.

This is a new concept, where government is paying for land occupation in a modern and integrated way. It represents an outstanding opportunity for food companies wanting to expand production outside their traditional borders, to complement and diversify their offer, without having to buy this land. This new concept of integrating small holders into modern food chains impressed the more than 200 executives who discussed this opportunity at Harvard, and is a possibility also for the governments in developing countries to develop some areas economically, with inclusion, which in my view, is one of the most important word for the new decade.

Discussion question

Which are the strong points and risks involved in this alternative form of investment?

Chapter 65

The Benefits and Risks of Governments Supporting Local Companies to Internationalize*

In the last couple of years, public development banks in some emerging countries provided strong support to local (national) companies to make acquisitions outside, expanding their operations to other countries. To build the so-called "national champions," billions of dollars were invested and these investments gave different returns to local societies that financed it.

In the specific case of Brazil, some large corporations processing animal proteins, among other sectors, received support, which meant financing at lower interest rates than the ones available with private banks. This strategy built up global leaders in the beef and other meat producing chains, benefiting from the strong value of the local currency, the Real, in these acquisitions.

Some beef companies diversified their product lines and became animal protein processing companies (acquiring poultry and pork production lines, products and brands) and further expand their strategies to broader food companies with a complete product line, from meats to milk, from ready to eat meals to pizzas and desserts. It is the emergence of new competitors for the traditional multinational food companies. In the opposite direction, the market has seen poultry companies diversifying to beef, milk and other products.

The objective of this story is to list what could be: (a) possible benefits for local governments and as a consequence, to local societies to build these "world champions," and (b) the major risks involved in such operations. The possible benefits are that these outside acquisitions could justify investments by helping to promote exports coming from the original country. This could be possible with more market access, one of the most important assets that come with an outside acquisition. For

* First published in *China Daily* (October 26, 2011).

instance, when a Brazilian company acquires a company in Italy, or in China, it acquires access to these markets. This access includes a local sales team, access to supermarkets and other marketing channels and knowledge of communications. It also includes the acquisition of local brands that may have tradition and connection/intimacy with consumers, instead of exporting with a national brand and building a new brand from zero, a very expensive and challenging activity in a different market.

A second bundle of possible benefits is related to business expertise, such as how to finance activities in this new country, the knowledge of institutional environment (laws/lawyers) and other benefits linked to the intangible assets of employees that come with the acquired company.

The international investor acquires knowledge of the local supply chain and suppliers' base (original suppliers of the acquired company). Another strategy is to introduce original management style and practices in the newly acquired company along with possible value capture achieved with effective management and cost reduction.

By considering the original country as a major new supplier to the acquired company and expanding the product portfolio from one source of protein to others and then to milk and food products, they (original country company) will become exporter of several other products that are components (pizza, pasta, tomatoes, etc.) which originally were not exported to that market. This also involves packaging in the case of ready to eat foods, design and other supporting functions, that would be done in the original country and sold internationally.

Another possible benefit for the society would be to bring earnings and profits conquered from international sales to local shareholders, like the traditional flows of multinational companies repatriating money. Finally, when a company operates in several countries, it can be matching different supply sources and international channels using specific products and brands coming from supplier countries to fit consumers needs — in essence, capturing value with global trade.

Although there are several possible benefits, some risks are present within these international investments sponsored by local banks and societies.

One debate is related to which companies will receive the support, or will be preferred by government's official development banks. Criteria should be well defined since these investments require public money. Another risk comes with the complexity of managing processes of different companies, running businesses in different countries, different cultures and different environments. Sometimes the local company is not prepared for this rapid growth. Which business to buy should be considered, from mature industries with low margins or promising new ventures be purchased? Where to buy requires consideration of all the risks — in mature markets with compressed margins and powerful retailers or in emerging countries, that occasionally experience growth of 15% per year in some food markets?

The moment (when) of the purchasing operation also requires careful consideration, since an overpriced asset acquisition makes it difficult to recover. Exchange rates fluctuation is also a possible risk, since debts are in US dollars, and devaluation of the local currency, used for this purchase, may happen transforming it into an expensive acquisition. Finally, there are the learning costs of facing unions, syndicates, suppliers' associations, governmental regulation and other barriers for new players coming from outside.

It is little bit premature to evaluate these investments and the conclusions cannot be generalized to all businesses. This chapter highlighted some contributions to the debate on the benefits and risks involved.

Discussion question

What are your views about the opportunities and risks of receiving governamental support to promote development?