

The Global Agro-food System From Past to Future

Rosa Caiazza

Parthenope University of Naples, Italy

Tiziana Volpe

National Research Council (CNR), Institute for Service Industry Research (IRAT), Naples, Italy

Agro-food system refers to a combination of institutions, activities and enterprises that collectively develop and deliver material inputs to the farming sector, produce primary commodities, and subsequently handle, process, transport, market and distribute food and other agro-based products to consumers. At the aim to investigate the building blocks of agro-food system the authors realize a multilevel analysis of countries, value chains and firms. At macroeconomic level, the paper analyzes main drivers of comparative advantage of main economic areas of the world. Then it evidences the relevance of the domestic and global agro-food value chain. After the historical evolution of agro-food firms, the paper offers a deep analysis of main characteristics of multinationals and small and medium enterprises. This conceptual paper is based on many official documents realized by UNCTAD, UNIDO, EC, World Bank, and FAO that analyze agro-food industry globally. It provides a general framework useful for next studies on agro-food system.

Keywords: agro-food, multinational, small and medium enterprises, internationalization, value chain

Introduction

While agriculture refers to the production of food and non-food items through farming or animal husbandry, agribusiness refers to commercial agriculture, usually farms specializing in non-subsistence food and non-food production, and related businesses that are directly involved in the value chain of agricultural products (UNCTAD, 2009). Specifically, agro-food is a subset of agribusiness that refers to industries involved in the production, processing and inspection of solely food products made from agricultural commodities. It cuts across various industries and constitutes the aggregation of many commodity sub-sectors such as grain, dairy, coffee, fruit, vegetables, cotton, etc.. Using the information drawn from World Bank (2003) in this section, the authors discuss the agro-food system as an interdependent sets of institutions, activities and enterprises which collectively develop and deliver material inputs to the farming sector, produce primary commodities, and subsequently handle, process, transport, market and distribute food and other agro-based products to consumers (Jaffee, Kopicki, Labaste, & Christie, 2003).

Macroeconomic landscape, policies, laws, regulations and standards perform a variety of functions such as defining, allocating, and enforcing property rights, defining and enforcing functional roles, defining the terms

Rosa Caiazza, Ph.D., Assistant Professor, Department of Business, Parthenope University of Naples, Visiting Researcher at Wharton University of Pennsylvania and Univeristè Libre de Bruxelles.

Tiziana Volpe, Ph.D., Researcher at the National Research Council (CNR), Institute for Service Industry Research (IRAT).

Correspondence concerning this article should be addressed to Rosa Caiazza, via Medina 40, 80133, Napoli (IT). E-mail: rosa.caiazza@uniparthenope.it.

and conditions of product exchange, and reducing transaction costs by clarifying the outcome of contingencies. Some institutions are super-national other national, some are generic and many of them prove specific to a given subsector or location. Government bodies mandate rules, either at the seller or buyer end of transactions such as food product standards, food sanitation regulations, pesticide registration laws, and provisions of commerce mandated by specific commodity markets. Still others, who are generic, yet have substantial influence on the functioning of agro-food systems such as laws of contract, customs regulations, and rules applicable to warehouse receipt systems. The entire range of activities required to bring a product from the initial input-supply stage, through various phases of production, to its final market destination is generally identified with the concept of value chain (UNIDO, 2009). The production stages entail a combination of physical transformation and the participation of various producers and services, and the chain includes the product's disposal after use. As opposed to the traditional exclusive focus on production, the concept stresses the importance of value addition at each stage, thereby treating production as just one of several value-adding components of the chain (see Table 1).

Table 1

Agro-food System Building Blocks

Institutions	Activities	Enterprises
Global vs. National	Prevision of inputs	Agriculture-based vs. Agriculture-related
Generic vs. Specific	Production	Multinational vs. Small and medium enterprises
	Processing	
	Distribution and retailing	

The whole process of value creation is realized through the involvement of many firms. Thus, another set of agro-food system building blocks consists of agriculture-based and agriculture-related enterprises (Jeffee et al., 2003). While the former produce agricultural goods, the latter includes food processors and manufacturers, retailers, traders, and suppliers of inputs for agricultural productions. They make and sell inputs to farms, process crop and livestock products, wholesale and retail fresh and processed products to consumers, and process and sell raw materials to other industries. Agro-food firms can be located in rural or urban areas. They can be large or small, domestic or foreign, public or private, or a mix. They can be corporations, cooperatives, family-based entities or single proprietorship. Their technologies and specialties will vary. Although frequently equated with big business most agribusiness firms are small individual intermediaries and microenterprises.

Countries Analysis: A Comparative Advantage

Combining agriculture-based and agriculture-related activities, agro-food system at country level is affected from the dynamic interactions of a range of environmental, technological and political drivers such as environmental changes, technological innovation, trade policy (EC, 2009) (see Table 2).

Table 2

Country Drivers of Comparative Advantage

Natural	Technological	Political
resource; environmental change	innovation; technical support centers; technology transfer; research and development	political environment; industrial climate; legal environment; trade policy ; tariff system; investment policy; market regulation

Differently from any other industry, agriculture is highly dependent on natural resource endowment such as arable land, soil, climatic conditions, and water. Because of disparities in agricultural endowments, some economies have become large net importers of food, while others with food surpluses are net food exporters. A third group of countries possess arable land and water, but are unable to become self-sufficient in food production or enter export markets partly because of their underutilization of arable land and low productivity (UNCTAD, 2009). In most of these regions conflict conditions erode the livelihood systems of poor rural people (Richards, 2006; Flores, 2004). Moreover, global environmental change is increasing pressure on an already fragile natural resource base in complex environments that are the mainstay of rural livelihoods (Tilman et al., 2001). Whether these are new pests and diseases, soil nutrient depletion or water scarcities, there are a range of new dynamic interactions that affect the system properties of durability, robustness, resilience and stability. Climate change and the impacts of increased variability of rainfall present particular challenges. But there are also dynamic interactions between agriculture, health and disease, with potentially profound effects on agricultural sustainability (Thompson et al., 2007). Thus, it is the dynamic interactions between nature and society that need to be taken seriously in thinking about future socio-technical trajectories.

Technological improvements play an important role in increasing agricultural productivity (Beintema & Stads, 2008). Agricultural technological development now encompass the application of biotechnologies, improvements in agricultural resource management, including land use, and water conservation, reductions in the use of pesticides and fertilizers and support measures for sustainable farming. The government can contribute to such support by providing agriculture-related infrastructure facilities, such as irrigation and building rural roads and those linking farms to markets, along with their maintenance. Increasing productive capacities of farmers, such as through technical training and better water management, are other important aspects of public sector institutional support. However, the extent to which institutions contribute to agricultural production varies by country and by type of institution. Budgetary constraints in poor countries limit their capacity to establish relevant and adequate institutions in support of agricultural development. Thus, developed countries invest considerably more in agricultural R&D than developing countries.

Political regulation guides both the inter-country and inter-firm distribution of financial, technical, and other resources of agro-food system (Raynolds, 2004). Research documents the importance of international and national policies in regulating world trade, governing both the composition of agro-food exports from the global South (Gibbon, 2001) and their entry into markets in the Global North (Dolan & Humphrey, 2000; Raynolds & Murray, 1998). Whereas overall trade barriers in industrial countries have declined significantly over the last decade, the remaining barriers are concentrated on agricultural products and labor intensive manufactures in which developing countries have a comparative advantage (World Bank, 2005) (see Table 3).

Table 3

Country Analysis

	Developed countries	Developing countries
Natural	Low	High
Technological	High	Low
Political	High	Low
Enterprises	Agricultural-related	Agricultural-based

As a result of environmental, technological, and political changes, agro-food system is becoming much

more complex (EU, 2009). The value center is shifting from agriculture-based to agriculture-related activities, such as biotechnological research, production of agro-chemical inputs, and realization of highly processed food (Bonnano, Busch, Friedland, Gouveia, & Mingione, 1995; McMichael, 1994). The expansion of relatively new activities connected with the industry has also resulted in the involvement of some companies not previously associated with agriculture. Generally, value creation resides mainly in the non-agricultural production segments of agribusiness, such as retailing, and upstream activities, such as biotechnology-enhanced seeds (UNCTAD, 2009).

The Value Chain in Agro-food System

The concept of value chain is a framework used for analyzing the sequence or stream of interrelated activities performed by firms, organizations or individuals necessary for bringing a product or service from production stages to final customers. Using the information drawn from UNIDO (2009), in this section, we evidence the relevance of value chain in the agro-food system. They can be seen as an economic and social reality involving a set of actors and activities that interact and work together to satisfy the needs of specific markets. The value chain in agribusiness comprises the suppliers of inputs such as seeds, chemicals and machinery, farmers and other agricultural producers and service providers, processors of agricultural goods such as manufacturers of foods and beverages, trading companies dealing with agricultural commodities, and retailers, such as supermarket chains.

Using the chain concept, it is possible to analyze the characteristics of the different actors and the linkages between them, plan the implementation of activities, promote competitiveness, together with the principles of equity, food security and sustainability, promote the organization of small and medium sized producers, foster dialogue and consultation between different economic operators. To realize a chain of different actors, it is fundamental to build trust, via processes of rapprochement governed by transparency, tolerance and respect; encourage consultation between different institutions in the public sector, as well as between the public and private sectors, which promotes the formulation, presentation, and adoption of policy instruments. The process of promotion of agro-food chains involve different institutions. The chain is usually instigated by agriculture ministries, together with other public institutions, such as ministries of trade and industry, as well as export promotion agencies. In some countries, national competitiveness councils have been set up to improve the intersectional coordination needed to implement the chain.

Agro-food chains are operating in increasingly competitive markets where there are efficient actors willing to cut their costs to a minimum without sacrificing quality. By organizing agribusinesses in line with the agro-food chain model, it often becomes possible to reduce transaction costs and increase profit margins of agribusinesses by rationalizing operations, achieving economies of scale and reducing the steps between production and consumption. In addition, organizing the agro-food chain leads to better planning of primary and industrial production and guarantees stable product volume and quality. It is also important to adapt to change where required, in order to maintain or increase market share.

Actors involved in each of the different components of the chain vary widely. This tends to be reflected in the sort of relationship between them and the type of chains they create. The primary component of the chain includes small, medium, and large scale producers who differ in terms of level of education, technology used, productivity, and level of organization, rather than simply in terms of farm size. Producers with little access to production factors, such as land, capital, education or technology, often link with traders in the informal sector.

In turn, traders in the informal sector associate with retailers or processors in the same sector. The intermediate marketing link in the chain includes transport and storage service providers in chains associated with international markets. There are differences between these actors, usually related to how informal they are in terms of business capital, the technologies used, and service quality and security. The post-harvest component of the chain is highly diverse, not only in terms of classification such as large, medium, small, and micro enterprises, but also in terms of location and the level of involvement with rural producers and consumers. The distribution element of the chain includes wholesalers, importers, and exporters, as well as an increasing number of supermarkets. Competing with them is an endless number of small and medium sized retail outlets. The consumer element of the chain includes various types of consumers with different income levels and purchasing power. Different criteria can be used to characterize agro-business chains depending on the purpose of the classification. Some of the criteria for categorizing chains and the differences within the categories are area of activity, scope, organization, and products.

Chains can be classified as local, regional, national, or global. In most cases, local or regional chains are associated with national or international chains, normally via the manufacturing or final distribution link in the chain, to cater to national or international markets. There are business chains that link together small producers, which are chains developed and structured around a large purchaser like an agro-industry, supermarket chain or exporter. These can be classified as spontaneous chains that have come into being with no outside influence and induced chains which have come into being through the intervention of agents such as non-governmental organizations (NGOs), government agencies, and development cooperation or similar programmes.

Chains are divided into specialized chains in which the end product has special characteristics to cater for requirements of market segments or niches where differentiation is a key factor of competitiveness and generic chains in which the end product is not differentiated and volume and price are the main factors of competitiveness. A new concept for organized chains has been developed and positioned in recent years, with strong linkages between its actors, to cater to demanding markets that value special product attributes (see Figure 1).

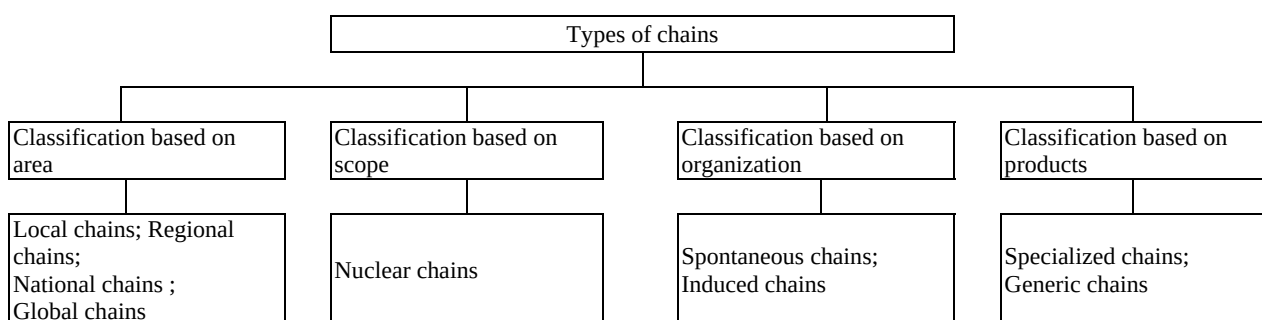


Figure 1. Types of chains.

Historical Evolution of Firms

The analysis of historical evolution of agro-food firm discussed in this section is drawn from UNCTAD (2009) at the aim to evidence the longitudinal evolution and the current state of this industry at global level. In the 16th century, agricultural production in developing countries was an early target for foreign investors, traders and state-mandated companies aimed at supplying agricultural goods to the growing populations and industries of their home countries (Wilkins, 2008; Munro, 1976). From 1960s to 1976, agriculture was affected

by a wave of nationalizations of foreign enterprises in developing countries. Since the 1980s, restriction on foreign ownership across most of the developing world has influenced FDI flow in agricultural production (Rama & Wilkinson, 2008). Companies reduced their direct investments in farming and plantations, purchasing agricultural foods from local farmers and providing technical advice and marketing services. Since 1990s, foreign direct investments in agriculture has grew slower than that in other industries, although there were major variations by country and commodity (Tsakok & Gardner, 2007). The general trend was towards industrialization which increased the share of manufacturing unrelated to agriculture. In many countries, this industrialization was accelerated by government policies. In addition, as part of the decolonization process, host governments increasingly assumed control over their natural resources, including land, making it more difficult for foreign investors to become involved in the production of agricultural goods directly (Jones & Khanna, 2006). Companies' involvement in agriculture-related activities in developing countries has increasingly focused on the upstream industries for providing inputs, seeds and machinery or downstream industries, for trading, processing and retailing. Over the past two decades the multinational corporations have reduced their involvement in farming and plantations improving their involvement in highly profitable segments of the global value chain. Agro-food system has been transformed from a loosely coordinated local network of producers and consumers to a globalized system of formally regulated trade which links socially and spatially distant sites of production and consumption. Small producers now compete in global markets that are much more demanding in terms of grades and standards and more concentrated and vertically integrated than in the past (Reardon & Barrett, 2000). A major concern about this concentration is the control exercised by a handful of private corporations over decision-making throughout the agro-food system. Increasingly, these firms are developing a variety of different alliances with other players in the system, forming new food system clusters (Heffernan, Hendrickson, & Gronska, 1999). As agriculture becomes more concentrated and integrated, these giant clusters are establishing an oligopoly over large parts of the agro-food chain, enabling them to maximize profit while minimizing risk. As a result, the agro-food system has begun to resemble an hourglass. At the bottom are millions of farmers producing the food, while at the top are billions of consumers. In the middle, there are dozens of multinational corporations earning a profit from every transaction. Typically, goods are exchanged through closed contracts or intra-firm transfers rather than open markets and even when they are exchanged in wholesale markets, prices may be well below the cost of production due to oversupply.

Multinational vs. Small and Medium Enterprises

Using information drawn from UNCTAD (2009), in this section, we discuss the role of multinational and small and medium enterprises in the agro-food industry. According to the sources, multinationals have only limited involvement in the production of agricultural commodities exported from developing countries, focusing instead on downstream operations. The universe of agriculture-related multinationals includes food processors and manufacturers, retailers, traders, and suppliers of inputs. The largest suppliers are diversified firms engaged in the production of all kinds of chemical products, including agricultural supplies. The power of multinational suppliers of inputs over their buyers can be significant, especially when the multinationals control key technologies. Manufacturers and processors that are closely linked with production can have a major impact on agriculture. Food and beverage processors are large firms, and the majority are headquartered in developed countries. Retailing and supermarket multinationals play a major role in international agricultural supply chains. The largest multinationals in this industry are from developed countries and are engaged in the

distribution of not only agricultural or food products, but also a wide range of other goods. The largest supermarkets have significant buying power vis-à-vis suppliers such as farmers. Seldom engaging in direct production of crops or agricultural commodities (Bijman, 2008), they are more likely to participate in agriculture in developing countries through contract farming.

Multinationals can have large internal and intra-firm markets, accessible only to their affiliates or associated firms. They also control or have access to large markets of unrelated parties, and can therefore influence the granting of trade privileges in their home, or a third country, markets. Multinationals dominate international markets for some agricultural products and a large part of international trade in those products is intra-firm trade, which makes access by independent producers difficult, if at all possible. Furthermore, some multinationals have established brand names and distribution channels with supply facilities spread over several national and international locations. This makes it difficult for developing-country firms to gain physical access to international marketing and distribution channels to consumers. The strong multinational domination of market access to developed-country markets is particularly evident in classical cash crops such as coffee, where international trade and the value chain in general are dominated by a handful of international trading houses and roasters.

Some trading multinationals from developing countries have acquired knowledge, capabilities and experience, permitting them to successfully compete in international markets with traditional multinationals from the North. In addition to trade intermediation, which remains an important function, they have evolved into global supply chain managers. In many host countries, developing-country trading multinationals have become major players in export-oriented and domestic agriculture. They help generate, sustain or increase exports by providing the necessary ingredients, and occasionally help those countries exploit their comparative advantages or upgrade their existing advantages.

The most dynamic part of agricultural trade has been the trade in higher value, non-traditional products, such as vegetables and cut flowers. Developing countries are taking a rising share in global exports of these products. It has enabled a number of these countries to diversify away from stagnating traditional commodity exports towards higher value agricultural exports, for which the demand is rapidly growing. Non-traditional products are easier to export as they have not been as adversely affected by trade barriers. But at the same time, their export markets are very demanding in terms of quality, volume, delivery conditions and timing, which puts pressure on developing-country producers and exporters. Most of these products are exported for sale to developed-country consumers, and market access is almost entirely controlled by companies from developed countries. Indeed, international markets for non-traditional agricultural products are essentially driven by multinationals which control and coordinate international agribusiness supply chains. These multinationals have therefore been instrumental in increasing and diversifying developing-country agricultural exports towards higher end products. They have provided the necessary ingredients for boosting agricultural competitiveness, thus helping several developing countries to shift from static to dynamic comparative advantages in agricultural exports.

Multinational entry in agricultural production can result in higher market concentration in the case of commodities where the tendency of multinationals to use highly mechanized, capital-intensive agricultural production techniques may render smallholders uncompetitive. For many agricultural commodity markets, the sheer size of multinationals and their technologies and strategies can mean an industrialization of production. In fact, large-scale production is already a part of developing countries' agriculture, but for most countries and

most products, this is not yet the dominant form of production (Hazel, Poulton, Wiggins, & Dorward, 2006). Production technologies in some agricultural industries like sugar are particularly unfavorable for producers in terms of market power distribution, with a large number of farmers selling to few processors. In some industries, and in a number of countries, multinationals have established monopolies. This often makes multinationals more efficient, but at the same time, more responsive to the needs of their suppliers, as they are commonly under observation from their home country for their good behavior. In many countries, production and marketing of a number of agricultural commodities were previously regulated through forms of marketing boards until the late 1980s and early 1990s. Thereafter, deregulation and liberalization in many developing countries led to the weakening of aggregated producer power. The power asymmetry on these markets was further skewed by an increasing concentration on the buying end of many agricultural commodity value chains, frequently dominated by multinationals. The coffee and cocoa value chains are good examples, with only a few companies sharing most of the market.

The most concentrated stage of many agriculture-based value chains is international trading. Concentration on that stage is often blamed for the growing price difference between global and domestic markets. The significant role of international trading companies has not changed much since the late 1970s, indeed, in a number of products, it has even increased, leading to a higher degree of concentration, and thus market power of multinationals in these markets. It is at this stage in the value chain that economies of scale and the know-how of multinationals seem to be the crucial competitive advantages over newcomers, which guarantees their continuing dominance. High and increasing concentration, and therefore the market power of transnational trading companies, is considered a major reason behind the growing difference between world and domestic prices of such products as wheat, rice, and sugar (FAO, 2004). To date, the few attempts to attribute downward movements in the producers' shares of retail prices to rising multinational market power have not been successful (Gilbert, 2008). Contract farming arrangements offer opportunities for the abuse of asymmetric power relations. This arises from the way multinationals engage with smallholders, which gives the former more influence in determining the production method and other quality-determining factors. The unequal distribution of market power in such arrangements can produce some very undesirable outcomes. It has been argued that the bargaining power between multinationals and contract farmers is so unevenly distributed that abuses occur regularly (Singh, 2002; Kirsten & Sartorius, 2002).

Beyond individual segments of the agribusiness value chain, a few very influential alliances of multinationals have emerged which span various upstream and downstream stages of respective value chains. As agglomerates of vertical activities related to agricultural production, they encompass seeds and chemicals, processing, packaging, and trading activities, and for more than one commodity. This situation, if empirically and analytically confirmed, is qualitatively different from concentration within a single industry that has been relatively common in the past few decades. The global supply of proprietary seeds and agrochemicals is controlled by only a few multinationals. This strong power of big multinationals in some chains, such as that for soya, raises concerns about how much room is left for competition, for consumers' choices and for independent farmers in the respective markets. In the face of large multinational buyers, producer organizations can bundle producer power as a way to mitigate power asymmetries. More direct linkages between consumers and producers can also help by short-circuiting the channels that some multinationals control, as in the case of fair trade. In addition, fair trade organizations have created a mechanism by which consumers can choose to pay a premium in support of farmers.

The fair trade system helps distribute the higher revenue to the producers, and evidence suggests that this mechanism strengthens agricultural cooperatives (Milford, 2004). However, only a limited number of farmers in developing countries are part of related certification schemes. In the light of existing evidence, the emerging picture of competition, concentration and power distribution in agricultural commodity markets in which multinationals play an important role, especially in processing and trade, seems to be unfavorable for producers in developing countries. The high level of concentration on the downstream end of agribusiness value chains vis-à-vis an often atomized group of sellers suggests the prevalence of a highly unequal distribution of market power that should be addressed by host-country governments and development partners to avoid the abuse of that power. Various measures are available to host countries to counter excessive market power (see Table 4).

Table 4

Multinational vs. Small and Medium Enterprises

Countries	Activities	Enterprises
Developed	Prevision of inputs	Multinational agriculture-related
Developing	Production	Small and medium enterprises agriculture-based
Developed	Processing	Multinational agriculture-related
Developed	Distribution and retailing	Multinational agriculture-related

Small and medium enterprises are important component of the food processing sectors in developed countries, particularly in Europe and Japan, both numerically and in terms of manufacturing value-added. At the same time, the trends to concentration are evident as different products segments on the retail shelves are reduced to three or four leading brands (FAO, 2009). The reduction in farm numbers and the successive increase in minimum viable cultivation sizes are also evident in the industrialized countries. A detailed consideration of the dynamic of small and medium enterprises in the food-processing sector of developing countries would have to take into account the sharp differences between the different agro-food products involved, as regards both processing and raw material supplies. Many traditional processing activities, especially in grains, oil and sugar have reached levels of scale and automation that offer virtually no space for small and medium enterprises. Recent developments in the dairy sector, so critical to the small-scale farming sector of many developing countries, would seem to be advancing in this same direction. On the other hand, the surge in demand for prepared fruits and vegetables, affecting developing countries in all continents, is based on labor intensive and farm activities, where the possibilities for participation by small and medium enterprises appear to be significantly higher. The opportunities and challenges facing small and medium enterprises in food processing and related activities derive, therefore, from the impact of the new competitive environment on scale, minimum quality and the perspectives for non-traditional products (Wilkinson, 2004). At the same time, a distinction should be made between traditional small and medium enterprises activities and new entrants, which may be small and medium enterprises in new activities or new actors in traditional activities.

Conclusions

This conceptual paper is based on the study of many official documents realized by World Bank, UNCTAD, UNIDO and other international organizations that analyze agro-food industry globally at the aim to offer a general framework for analyzing main aspects of agro-food system. At macroeconomic level, it analyzes main drivers of comparative advantage of main economic areas of the world. Then it evidences the relevance of the domestic and global agro-food value chain. After the historical evolution of agro-food firms, the paper

offers a deep analysis of main characteristics of multinational and small and medium enterprises. It provides a general framework useful for next studies on agro-food system.

References

- Beintema, N. M., & Stads, G. J. (2008, October). Measuring agricultural research investment: A revised global picture. ASTI Background Note.
- Bijman, J. (2008, May). Contract farming in developing countries: An overview. Working paper, Wageningen University, Wageningen.
- Bonnano, A., Busch, L., Friedland, W., Gouveia, L., & Mingione, E. (Eds.). (1995). *From Columbus to ConAgra: The globalization of agriculture and food*. University of Kansas Press, Lawrence.
- Bruinsam, J. (2003). *World agriculture: Towards 2015/2030 an FAO perspective*. London: Earthscan.
- Dolan, C., & Humphrey, J. (2000). Governance and trade in fresh vegetables: The impact of UK supermarkets on the African horticulture industry. *Journal of Development Studies*, 37(2), 145-176.
- EC. (2009). New challenges for agricultural research: Climate change, food security, rural development, agricultural knowledge systems. European Commission Directorate—General for Research Communication Unit Brussels.
- FAO. (2004). The state of agricultural commodity markets. Food and Agriculture Organization of the United Nations Report.
- FAO. (2009). Agro-industries for development. Food and Agriculture Organization of the United Nations Report.
- Flores, M. (2004). Conflict, rural development and food security in West Africa. ESA Working paper 04-02, January. Food and Agriculture Organization of the United Nations, Rome.
- Gibbon, P. (2001). Agro-commodity chains. *IDS Bulletin*, 32(3), 60-68.
- Gilbert, C. L. (2008). Value chain analysis and market power in commodity processing with application to the cocoa and coffee sectors. *Commodity Market Review 2007-2008*. Rome: FAO.
- Hazel, P., Poulton, C., Wiggins, S., & Dorward, A. (2006). *The future of small farms*. RIMISP.
- Heffernan, W. D., Hendrickson, M., & Gronski, R. (1999, February 5). *Consolidation in the food and agriculture system*. Report to the National Farmers Union, 1999. Department of Rural Sociology, University of Missouri, Columbia, M.I.
- Jaffee, S., Kopicki, R., Labaste, P., & Christie, I. (2003). Modernizing Africa's agro-food systems: Analytical framework and implications for operations Africa region. Working paper series No. 44 February 2003.
- Jones, G., & Khanna, T. (2006). Bringing history (back) into international business. *Journal of International Business Studies*, 37(4), 453-468.
- Kirsten, J. F., & Sartorius, K. (2002). Linking agribusiness and small-scale farmers in developing countries: Is there a new role for contract farming? *Development Southern Africa*, 19(4), 503-529.
- McMichael, P. (Ed.). (1994). *The global restructuring of agro- food systems*. Ithaca, N.Y.: Cornell University Press.
- Milford, A. (2004). *Coffee, co-operatives and competition: The impact of fair trade*. CMI Report, R 2004:6. Chr. Michelsen Institute, Bergen, Norway.
- Munro, J. F. (1976). *Africa and the international economy 1800-1960*. London: Dent.
- Rama, R., & Wilkinson, J. (2008). Foreign direct investment and agri-food value chains in developing countries: A review of the main issues. *Commodity Market Review 2007-2008*. Rome: FAO.
- Raynolds, L., & Murray, D. (1998). Yes, we have no bananas: Re-regulating global and regional trade. *International Journal of Sociology of Agriculture and Food*, 7, 7-43.
- Raynolds, L. (2004). The globalization of organic agro-food networks. *World Development*, 32(5), 725-743.
- Reardon, T., & Barrett, C. B. (2000). Agroindustrialization, globalization, and international development: An overview of issues, patterns, and determinants. *Agricultural Economics*, 23(3), 195-205.
- Richards, P. (2006). The history and future of African rice: Food security and survival in a West African War Zone. *Afrika Spectrum*, 41(1), 77-93.
- Singh, S. (2002). Contracting out solutions: Political economy of contract farming in the Indian Punjab. *World Development*, 30(9), 1621-1638.
- Tilman, D., Fargione, J., Wolff, B., D'Antonio, C., Dobson, A., Howarth, R., Schindler, D., Schlesinger, W. H., Simberloff, D., & Swackhamer, D. (2001). Forecasting agriculturally driven global environmental change. *Science*, 292(13), 281-284.
- Tsakok, I., & Gardner, B. (2007). Agriculture in economic development: Primary engine of growth or chicken and egg? *American Journal of Agricultural Economics*, 89(5), 1145-1151.

- Thompson, J., Millstone, E., Scoones, I., Ely, A., Marshall, F., Shah, E., & Stagl, S. (2007) Agri-food system dynamics: Pathways to sustainability in an era of uncertainty. STEPS Working Paper 4, Brighton: STEPS Centre.
- UNIDO. (2009). *Agro-value chain analysis and development*. The UNIDO Approach Working Paper.
- UNCTAD. (2009). Transnational corporations, agricultural production and development. World Investment Report 2009, New York, Geneva.
- Wilkins, M. (2008). *The history of the multinational enterprise*. In A. M. Rugman (Ed.), *The Oxford Handbook of International Business*. Oxford: Oxford University Press.
- Wilkinson. (2004). The food processing industry, globalization and developing countries. *Journal of Agricultural and Development Economics*, 1(2), 184-201.
- World Bank. (2003). Towards a private sector-led growth strategy for Cambodia (Vol.1): Value chain analysis. Prepared by Global Development Solutions, June 2003.
- World Bank. (2005). Agricultural growth for the poor: An agenda for development. World Bank Book.