

Agro-industries trends, patterns and developmental impacts

Agro-industries occupy a dominant position in manufacturing. In low-income countries, they can represent as much as 50 percent of the manufacturing sector. Their contribution to total manufacturing is 61 percent in agriculture-based countries, 42 percent in countries in transformation and 37 percent in urbanized developing countries. Agro-industries also play a central role in employment generation, being characterized by a marked presence of women in their workforce. The increasing importance of processed agricultural products is a long-run trend observed in trade across regions and countries. The share of final agricultural products in global agricultural trade increased from 27 percent in 1980–81 to 38 percent in 2000–01. At the same time, the share of processed food in total food exports increased for all categories of developing countries. Particular growth has been observed in South-South trade. Urbanization and population growth in the context of economic growth have transformed the domestic markets of developing countries into the principal source of expansion for the global agrifood system. These combined opportunities of export and domestic markets offer a strategic opportunity for the integration of agriculture into dynamic agro-industrial supply systems with strong regional and employment impacts. However, issues of quality, food safety and logistical considerations have placed a premium on agro-industrial management and supply system coordination, demonstrating that competitive advantage needs now to accompany comparative advantage if the new opportunities for development are to be seized. A consensus is emerging that agro-industries are a decisive component of socially inclusive, competitive development strategies. For this to happen, however, public-private initiatives, ranging from basic infrastructure to services aimed at leveling the playing field for market access, will be vital.

INTRODUCTION

Agro-industry, understood here broadly as post-harvest activities involved in the transformation, preservation and preparation of agricultural production for intermediary or final consumption, typically increases in importance relative to agriculture and occupies a dominant position in manufacturing as developing countries step up their growth. In all developing countries, population growth is becoming predominantly an urban phenomenon, increasing the role of agro-industry in mediating food production and final consumption. While many commodity exports have declined in importance, so-called “non-traditional” food exports – especially fruits, vegetable and fish products – and components of the animal protein complex have become central to developing country exports. Whether looked at from the point of the domestic market or of exports, therefore, agro-industry plays a fundamental role in the creation of income and employment opportunities in developing countries. In addition, it can promote decentralized growth and generate non-farm activities in rural areas.

DELIMITING AGROINDUSTRIES

According to the International Standard Industrial Classification (ISIC), agro-industry consists of: i) food and beverages; ii) tobacco products; iii) paper and wood products; iv) textiles, footwear and apparel; v) leather products; and vi) rubber products. This paper includes all these sub-sectors in an aggregate analysis of agro-industrial production and value added, plus participation in GDP and in the manufacturing sector as a whole. Rubber products, leather, paper and wood

are then excluded from further analysis, while tobacco and textiles are discussed in more detail in relation to production/productivity, employment (including gender) and trade. The central concern of the analysis however is with food and beverages.

DEVELOPMENT IMPACTS

Agro-processing value-added as a percentage of GDP, using the UNIDO Industrial Statistics Database 2005, and the latest available years for each country, is calculated at 4.3 percent for low income countries (LICs) and 5 percent for lower-middle income and upper-middle income countries (LMICs and UMICs). Given the importance of the informal sector, however, these figures grossly underestimate the real picture. Agro-processing accounts for more than 50 percent of total manufacturing value added in the LIC countries, declining to 36 percent and 32 percent for LMICs and UMICs respectively. If we adopt the classification of the World Bank’s World Development Report 2008, agro-industry’s contribution to total manufacturing is 61 percent in agriculture-based countries, 42 percent in countries in transformation and 37 percent in urbanized developing countries. Within agro-industry, food and beverages account for more than 50 percent in LICs and LMICs and more than 60 percent in UMICs. Meat, fish, fruits, vegetables and fats, together with bakery, macaroni, chocolate “and others” account for 70–75 percent of food and beverage value added, with grains being more important in low-income and dairy products in high-income countries.

EMPLOYMENT GENERATION

Statistics from developed countries suggest that the food and beverages processing sector remains important from the point of view of employment at all levels of development. While on a slow downward trend, the sector is the leading employer (13 percent) in the manufacturing sector of the EU-25 and the third most important in the USA (9 percent). According to the ILO, on average 60 percent of workers in food and beverages in developing countries are employed in the informal economy. Considering only countries where data is available, the ILO calculates employment in the formal food and beverages sector at 22 million. The “non-traditional sector” (vegetables, fruits and fish products), which is currently the most dynamic in terms of exports from developing countries, is characterized by high levels of female employment, a percentage which can range from 50 percent to as high as 90 percent.

AGROINDUSTRIES AND TRADE

Globally, processed products account for 80 percent of food and beverage sales with 60 percent being consumed in high-income countries. Per capita retail sales of packaged foods are 15 times higher in developed countries than in LICs but are growing slowly at around 2–3 percent per year. On the other hand, growth in the consumption of packaged food is fastest in developing countries: 7 percent in UMICs, 28 percent in LMICs and 13 percent in LICs, figures reflected in the rapid growth of food and drink Foreign Direct Investment in these countries. It is expected that future increases in processed food consumption will be primarily in developing countries. Urbanization is accompanied by a shift in diet from cereals and root crops to the components of an animal protein diet and an increase in the consumption of fruits and vegetables. Developing countries are also participating in the global trends towards a greater involvement of women in the labour force and an ageing of the population. The transnationalization of the retail industry accelerates both the adoption of processed foods and the domestic consumption of “non-traditional products”.

In spite of evident natural comparative advantages, developing countries have not increased their share of global agricultural trade since the ‘80s. Yet the composition of that trade has changed dramatically. The pre-eminence of traditional tropical commodities has given way to the “non-traditional” exports of fruits and vegetables, fish products and beverages directed primarily to developed countries. The recent explosion of growth in large developing countries has, however, led to a surge in commodity exports from the animal protein complex by middle income developing countries, leading to an increasing participation of South-South flows in global trade. At the same time, South-South trade is responsible for substantial imports into LICs, threatening their ability to develop their own domestic agro-industrial base in this sub-sector. The crisis in traditional tropical crops, on the other hand, has led to the emergence of niche, special quality strategies, such as fair trade and organic products.

Import trends are key to understanding the food and beverage trade. Developing country food imports accelerated in the ‘90s and a trade surplus during the ‘70s of some US\$1bn was transformed into a US\$11bn deficit by the early years of the new millennium. As a result, the great majority of least developed countries (LDCs) have become net-importing countries, with such imports averaging a fifth of total imports, primarily of processed products. In developing countries that experienced a strong growth in the agricultural sector, there was less evidence of a rapid increase in imports.

The increasing importance of processed agricultural products is a long-run trend observed in trade across regions and countries. The share of final agricultural products in global agricultural trade increased from 27 percent in 1980–81 to 38 percent in 2000–01. At the same time, the share of processed food in total food exports increased for all categories of developing countries between 1991 and 2002. For UMICs there was an increase from 53 percent to 64 percent while for LMICs the increase was from 54 percent to 62 percent. The performance of LICs was considerably lower but even here there was an increase from 36 percent to 39 percent. On the other hand, a closer look at the data reveals that only a few UMICs and LMICs are responsible for the greater part of global processed food exports from developing countries. These are Argentina, Brazil, Chile, Indonesia, Malaysia, Thailand and Turkey.

Box 1: Trade and Foreign Direct Investment

Despite natural comparative advantages and due primarily to protective trade regimes and distorted tariffs in developed markets, developing countries have still the same market share in world agricultural trade as they had in the 1980s. Trade composition, however, has changed dramatically, as a result of static markets for traditional commodities and expanding demand for fruits, vegetables, fisheries and beverages. Other relevant trends include the increasing share of processed products in agricultural trade and growing South-South trade flows. We also highlight the small share of traded processed food compared to overall world sales, reflecting the strong domestic bias of food consumption, which favours FDI rather than trade.

AGRO-INDUSTRIES AND DEVELOPMENT STRATEGIES

Much discussion in the technical literature has focused on agro-industry as an alternative and/or complementary export-led growth strategy. At the same time, however, developing country population growth trends and urbanization should make their domestic markets the focus of future global expansion in prepared and processed foodstuffs. The food and beverages industry, more than almost any other sector, tends to locate production close to centers of consumption. Leading food firms are second only to the media in the ratio of their foreign to domestic operations and second only to chemicals/pharmaceuticals in the number of countries in which they are present. At the same time, the percentage of global production controlled by trans-nationals is lower than most other manufacturing industries. While the potential contribution of agro-industry to growth may be threatened by imports, the

dominant tendency is for foreign firms to set up operations in the domestic or regional markets of developing countries, in the form of FDI. Such a development has been facilitated by the generalized institutional reforms in developing countries that have de-regulated markets and guaranteed foreign investments, as discussed in other papers presented at this Forum.

Whether highlighting exports or the domestic market, current research has converged on the understanding that both traditional markets and spot markets are being replaced by variously coordinated supply chains. The logistical and quality requirements of these new supply chains create considerable constraints to the participation of small-scale and traditional actors. Many research and policy initiatives, in consequence, have been dedicated to the promotion of linkages between producers and markets..

THE IMPORTANCE OF THE INFORMAL SECTOR

The informal sector is an important component of agrifood in most developing countries but in the LDCs it can account for the greater part of food supply systems even in urban centers. It must therefore be the object of enabling rather than punitive policies, especially with regard to food safety.

Box 2: The Importance of Small and Medium Enterprises (SMEs)

In spite of trends towards concentration, SMEs have remained crucial in developed country food systems and are likely to be even more important in the developing country context, given the importance of informal supply systems. SMEs are dominant in traditional agrifood activities, which escape the effects of scale and new quality demands. Local supplies are favoured where roads are inadequate, in areas of low population density and where modern distribution systems are still not in place. SMEs are also emerging in response to new market niches, which demand innovation and entrepreneurship. Greater outsourcing by retail and food processing firms is similarly opening up opportunities for small suppliers, often integrated into global value chains. More ambitiously, SMEs organized in networks or clusters, along the lines of the industrial districts of Italy, have been identified and are being promoted in many developing countries, often as a link in global value chains. Finally, SMEs are emerging to the extent that new markets appreciate products and production processes associated with family farming, such as organics, fair trade and origin products.

We noted earlier that traditional exports have become the object of strategies based on social and environmental values. Similarly, values related to the specific features of local territories and artisanal products with “origin” characteristics have become the object of strategies for rural development, particularly in the light of the incorporation of Denomination of Origin legislation in the TRIPs agreement.

If the potential of agro-industry for development strategies is to be realized the creation of a competitive internal and external environment must be accompanied by the promotion of institutional, organizational and training measures geared to

empower small-scale producers and ensure a viable transition process for the informal food production and services sector.

CONCLUSIONS AND FUTURE PERSPECTIVES

Research on non-traditional exports whether from a global value-chain or national/regional comparative advantage perspective have captured fundamental shifts in the composition of South/North trade and identified new opportunities for agro-industrial development strategies. Quality and food safety issues, however, pose formidable challenges to market access. International cooperation and national initiatives for confronting compliance costs in this context become decisive. In addition, with the entry of large countries such as China and Brazil in these markets, the risks of the “adding up problem”, caused by oversupply from many producers, has to be minimized through greater coordination.

The identification of new export opportunities does not, however, resolve the crisis of traditional tropical exports, since these involve different actors and much greater numbers. Here, various niche strategies are making important headway but they are insufficient to provide perspective for the sector as a whole.

We have drawn attention to the increasing importance of South-South trade flows occurring in the context of a renewed dynamism in commodity markets, particularly affecting the animal protein complex, as major developing countries accelerate growth and urbanization. These flows are concentrated within a few countries and have been associated with greater scale economies which negatively affect the small farm sector, both within the exporting countries and through the impact of imports on domestic supply systems of other developing countries, particularly in Africa.

The current investment fever in bio-fuels will certainly reinforce these tendencies, while at the same time opening up the perspective of new sources of export revenue. Given that bio-fuel investments are at an early stage it is crucial that small farmer participation and regional development be designed into these programs. The Brazilian bio-diesel initiative, with its small farmer/regional quota system and Social Certification criteria governing the participation of bio-diesel firms, may point the way here.

In all these areas, issues of quality, food safety and logistical considerations have placed a premium on agro-industrial management and supply system coordination, demonstrating that competitive advantage needs now to accompany comparative advantage if the new opportunities for development are to be seized. In recent years, a more balanced view of public-private participation has been formed, as has a greater awareness of the decisive role of public goods. A consensus is emerging that agro-industry is a decisive component of socially inclusive, competitive development strategies. For this, however, public-private initiatives ranging from basic infrastructure to services aimed at leveling the playing field for market access will be vital.

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Useful Web sites

Centre de Coopération Internationale en Recherche Agronomique pour le Développement:
www.cirad.fr

Centro Latinoamericano para el Desarrollo Rural:
www.rimisp.org

Rural Agroindustries Development Project (PRODAR):
<http://infoagro.net/prodar/about.cfm>.

Agribusiness and Agro-industries at FAO:
www.fao.org/ag/ags/index_en.html

Agro-industries at UNIDO:
www.unido.org/doc/5070

Credits

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