



Global or local food chains?

Uncovering the dilemmas in Senegal and Peru

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Photo caption: Dutch onions arriving at the port of Dakar, Senegal

Photo credit: Ethel del Pozo-Vergnes

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Is it possible to re-localise food production and consumption? ‘Old’ market destinations are losing out in favour of new emerging markets. From being simple ‘policy takers’ developing and emerging economy countries are gaining sovereignty and becoming ‘policy makers’ – helping to reshape food systems and the geopolitics of food trade. Using case studies from Senegal and Peru, this paper examines whether local or global food chains are better at delivering food security and safety, decent employment, protecting the environment and contributing to economic growth. Both countries import and export food and feed. Both face policy dilemmas and are rethinking business interventions, juggling national food security, economic growth and international trade agreements while satisfying growing domestic and regional demands and new consumers’ aspirations.

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Executive summary

Should developing and emerging economy countries favour local over global food chains? Case studies from Senegal and Peru presented in this paper show a new and complex reality that challenges ideological views about re-localising food production and consumption. It points to the dilemmas but also to the potential and limits of national policies and food chain practices in a context of market globalisation.

The two countries differ in their dependence on food imports. But they show strong similarities regarding their participation in global agricultural trade, both exports and imports. Both countries highlight the sterility of polarised debates that pitch protectionism against international trade, and small-scale farming against big agri-business. And in both countries local food chains are complementary rather than an alternative to imported food, as is the case in many countries.

Asking how people actually feed themselves or wish to be fed, rather than the more familiar question 'how can we feed the world?' brings new perspectives into the debate, with important implications for policies and business interventions. A new and often overlooked issue is coming to the fore: changes in consumers' behaviour associated with urbanisation and new aspirations. Consumers, and low-income rural or urban consumers in particular, look mainly at food quantity and price (affordability). But consumers – including the majority of low-income households – are seeking different food attributes. Global products may be perceived as safer as they comply with sanitary controls, while local chains, mainly operating in informal markets, do not. Consumers also have food preferences based on taste and ease of preparation; convenience is important as they tend to work more outside the home and have less time and space to cook.

Import substitution through supporting national production – as in Senegal – cannot compete even with low-income consumers' preferences for imported rice or onions. The development of organic food production and of gastronomic trends does not meet the needs or the budget of the poorest, and often, as in the case of quinoa in Peru, most organic production is exported.

National governments in Senegal and Peru seek private investment and tax revenues to drive national economic growth. They also seek to comply with international regulations and trade agreements. Finally, they seek to exert governance over informal markets and vested interests in food marketing and distribution. Interventions on all three levels can favour large agribusiness over small producers and/or informal food chains. Support for national production and domestic market regulation can clash with international or regional commitments. Support to small and/or local food chains is considered a cost, as most producers are informal and do not contribute taxes.

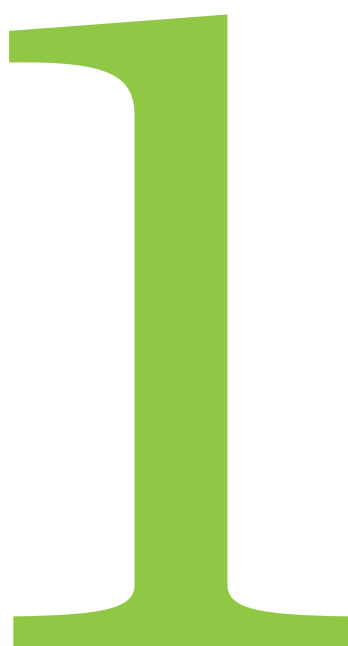
Governments tend to prefer large formal food chains as they bring in investments and much-needed taxes to provide public services such as infrastructure. In the Peruvian case, even public food procurement agencies prefer to buy canned milk from one of the big national formal dairy firms rather than sourcing locally from small-scale producers who, it is said are unable to guarantee product quality. Creating an enabling environment for big business is thus considered as an investment. In Peru, formal food chains will claim unfair competition from informal chains while at the same time important food processors acknowledge the importance of corner shops and street vendors to ensure the distribution of their products even to the poorest and most remote neighbourhoods.

In recent years mixed strategies have emerged in support of food security and national development via both local and global chains. Trade agreements reflect the new strategies governments in the global South are trying to develop to ensure both economic growth and food security for their people. Senegal and Peru both support local food chains through diverse market mechanisms (import regulations, promotion of gastronomy and local diets) while at the same time supporting agro-export diversification in new products and new market destinations. Trade agreements and increased agricultural exports are certainly contributing to economic growth and tax revenue, and also to employment – even if labour conditions are often far from decent. There have also been moves to formalise domestic food markets using more inclusive strategies. In Senegal, national small and medium-sized food businesses and young entrepreneurs are showing willingness to contribute taxes if they can also benefit from government support to compete.

What both country case studies show is that changes in domestic consumption, business and policy are contributing to reshaping global trade. Export market destinations like the US or the EU are losing their dominant position in the face of increasing and diversified food demand from Asian and Gulf countries. African and Latin American regional economic communities are also becoming more attractive. Better connectivity thanks to improved infrastructure is also allowing increasing intra-regional trade. South–South trade makes much of the old trade debate outdated, but still there are issues in North-South trade concerning fair competition, stability and credibility of trading rules that the World Trade Organization (WTO) is far from fixing. International food trade is a key component of world food security. To make markets and global and local food chains work for the many and in the long term, the performance of global and local food chains would need to be assessed against national and global concerns, related to food security and safety, employment, natural resource constraints and environmental impact but also with regard to consumers' aspirations.

Introduction

This section introduces the dilemmas of local versus global food chains and the factors that are reshaping agrifood markets and international trade. It outlines two case studies from Peru and Senegal which explore the perceptions of different actors. What are the key issues facing local versus global food provisioning and economic growth in highly dynamic food systems?



Since the economic liberalisation processes of the 1980s, profound changes have occurred in global and national food systems. While for many developing countries opening their national resources markets was envisioned as the only way to attract investments, over the last decade we have seen a revival of attempts to reassert national sovereignty to ensure food security. Re-localising food production and consumption has emerged as a narrative to deal with multiple crises: a way to improve food and nutrition security; drive economic growth and employment; reduce food waste; and to avoid negative impacts on the environment.

But are global or local food chains better at ensuring these objectives? Actors in the policy, academic, social and market spheres legitimate the performance of both chains according to their perceptions and ideologies.

This issue paper explores the dilemmas of local versus global chains in food provisioning through the perceptions of different actors in global and local food chains. It aims to contribute to challenging perceptions through evidence, current debates and ideological positions both in developed, developing and emerging economy countries regarding the performance of global and local food chains. What are the narratives and perceptions of consumers, civil society, policymakers, business and media about 'local' vs 'global' provisioning of food? What determines these perceptions? How do narratives of different actors vary? How do policies, business practices and consumer behaviours in countries under transition reshape national and global agrifood markets and international trade patterns in support of local or global food provision?

When we look closely at local and global food chains in individual countries, our understanding of food production and consumption is challenged. We see the differences but also the complementarities in food chain actors' narratives and practices, and the policy dilemmas involved in ensuring national economic growth and food security in a context of tough competition in global food trade, and changing consumption patterns associated with urbanisation and globalisation.

We have selected two interesting countries for this analysis – Senegal and Peru. Both are dependent on food and feed imports but are also important food exporters. Senegal is a least developed country (LDC) and depends on imports for up to 60 per cent of its basic food needs, much of it from Europe (see Box 1). But it is also an exporter of commodities and high-value horticulture to Europe and increasingly to other destinations. Peru is experiencing rapid economic growth and is a major agro-industrial food exporter while its imports of animal feed are increasing. At the same time, it is also experiencing a 'gastronomic revolution' promoting indigenous cuisine and the local products that comprise it. These two countries are trying to respond to food security needs, to market competition and trade agreements and to the aspirations of both their rising middle classes and low-income consumers. Peru and Senegal, like many developing or emerging countries, are facing dilemmas in balancing often-conflicting interests between actors involved in local and global food chains and between re-localising food production and consumption while ensuring economic growth through food exports.

This issue paper builds mainly on the findings of the Senegal and Peru case studies produced by the authors for the European Union Global and Local Food Assessment: A Multidimensional Performance Based Approach (GLAMUR) project.¹ A comprehensive literature review from various sources (market, civil society, policy and media), field visits and many interviews with food chain actors took place in both countries (in Dakar and Lima) between September 2013 and January 2014. In Sections 2 and 3 we develop the specific context in which global and local food chains have evolved in the two countries, the perceptions of different actors of the performance of these chains and we point to challenges and potential ways forward in specific conclusions for each country. Finally, in Section 4, building on the two case studies we point to knowledge gaps to explore further, to better address the policy dilemmas for ensuring food provision and economic growth in the face of highly dynamic food systems.

¹ See www.glamur.eu

Food chains in Senegal: local, global or both?

In Senegal, there are clear policy intentions to fight poverty and food insecurity while increasing economic growth and social development. Is national food self-sufficiency possible or should Senegal be balancing the needs of different food-chain actors? If the latter, how easy is it to harmonise the interests of national producers, food processors, large importers and exporters, retailers and consumers?



2.1 Context

Senegal is a largely rural economy, and agriculture is one of the population's main economic activities. The country is also deeply integrated into global agrifood trade and is highly dependent on global markets. Senegal imports 60 per cent of its basic foodstuffs, but is at the same time an important agricultural exporter, traditionally of groundnuts but increasingly diversifying into higher-value fresh fruits and vegetables (FFV). Changes and competition in global markets, as well as changes in consumption patterns associated with growing urbanisation, have challenged perceptions of the role of local and global food chains.

Senegal faces major dilemmas in ensuring long-term food security (especially for a growing and vocal urban population), earning foreign exchange and tax revenue, and reducing its import bill, in a context where local production is far from enough to cover local demand. Should food security be ensured through local production or imports? This struggle is accentuated by

regional integration and negotiations of an economic partnerships agreement (EPA) between West Africa and the European Union, which was agreed in February 2014 after over a decade of negotiations.

Political stability and democracy in Senegal have attracted private investment, better roads are being constructed and the Dakar port facilities have improved, adding to the potential of the country. Despite this significant progress in many domains, Senegal has a number of structural problems (see Box 1). It remains one of the world's least developed countries with high levels of poverty. The second national survey on poverty in Senegal (2010–2011), estimated that in 2011 rural poverty accounted for 57.3 per cent while 41.3 per cent was urban. Population growth – particularly among the cohorts of mostly unskilled youth arriving each year into the labour market – is one of the main challenges, especially given the growing influence of militant movements in neighbouring countries and Senegal's own conflict with groups in the Casamance region. Two out of three Senegalese are under 25 years of age.

BOX 1. SENEGAL – IMPORTANT NUMBERS

Population

- 3 million in 1960 – 12.5 million in 2010
- 60% rural – 40% urban
- 20% live in Dakar
- 55% live in rural areas
- 2 out of 3 are under 25 years of age

Poverty

- 55% of total population below the poverty line
- 57.3% in rural areas (2010–2011) – 42% in urban areas
- 26.1% in Dakar – 47.3% in other urban areas

Food insecurity

- 15.1% food insecure in rural areas
- 8.5% food insecure in urban areas

Food import dependency

- 22–47% variance between 2001–2010 – 37% dependence on average
- 100% of wheat imported, 70% rice, 90% milk (powder) – 60% on average for basic food products

Main imported food products in 2008 and 2012 (millions CFA)*

- Rice: 235,035–207,605
- Animal and vegetable oil and fats: 95,458–99,295
- Wheat: 70,660–96,663
- Dairy products: 66,631–49,405
- Raw and refined sugar: 13,210–46,931

- Fruit and vegetables (includes onions): 30,068–35,644
- Maize: 16,983–25,399

Main exports and key agricultural products in 2008 and 2012 (millions CFA)*

- Non-monetary gold: 9,497–222,336
- Oil products: 309,206–183,987
- Phosphoric acid: 106,905–140,353
- Fresh fish and shellfish: 86,105–132,212
- Raw groundnut oil: 7,889–13,727
- Fresh vegetables: 8,925–12,737
- Cotton: 10,312–10,990

Employment

- 60% work in agriculture
- 60% of non-agricultural employment is in the informal sector
- 55% contribution of the informal economy to GDP
- 200,000 youth enter the labour market annually; this figure is predicted to reach 280,000 in 2025

Among the least developed countries:

- Number 144 of 169 countries in the Human Development Index
- Number 152 of 181 in the 2010 'Doing Business' report – far behind others in Africa (Gambia 140, Nigeria 125 or Ghana 92)

* 1 CFA = 0.00152 EUR

Sources: République du Sénégal (2012); Ministère de l'Agriculture (2010); RuralStruc (2009); AGVSN (2011); Oxford Business Group (2011); ANSD (2012)

Currently, nearly 200,000 young people, the majority of whom come from rural areas, enter the labour market annually. This figure is likely to reach 280,000 in 2025 (RuralStruc 2009). In the absence of job creation in the formal economy, youth find work in informal activities. Informal employment accounts for 60 per cent of non-agricultural employment and this situation is exacerbated by rapid urbanisation (ANSD 2012). Finally, Senegal's location in the Sahel region exposes both local and export-oriented food chains to climate change, which drives adaptation of agriculture to recurrent drought and floods.

2.2 The changing structure of Senegal's agrifood sector

Agriculture and food in Senegal have undergone major changes in the last fifty years. The economic liberalisation process (1980–2000) and changes in global markets drove a restructuring in food chains and in the organisation of the diverse actors engaged in those chains while defining a new role for government intervention. The role of the state in agriculture has significantly changed from direct control to more concerted inter-professional policies. The state plays an arbitration role between different actors in food chains and at the same time tries to create an enabling environment for foreign and local businesses, while contending with different interests to ensure food security and poverty reduction (interviews with Wade, Ngane and Lakh). Direct engagement in markets such as groundnuts or cotton ended in 1995 in the context of a framework of mutual obligation (FMO) discussions with the EU (Diagana 2008). Liberalisation translated into the privatisation of the only publicly owned groundnut processing industry. Cotton became more integrated with a single processing company (Diagne 2008).

The government does not intervene much in standards, food quality or safety. Funding and capacity are scarce even if there is political will. Checks mainly take place at the borders, and especially for food imports at the port of Dakar. Some checks are carried out inside the country but the state relies largely on the private sector or acts in partnership (interviews with Ba, Lamine, Nidaye M, Ndiaye O and Seck).

An unusual feature of Senegalese market associations is the importance of brotherhoods and ethnicity in both formal and informal markets (Scheld 2010).² In terms of distribution, trade networks in Dakar are still dominated by ethnic and religious trade associations. Members of the Mouride Brotherhood dominate market associations

in Dakar. Brotherhood membership provides a crucial introduction to customers and suppliers in the marketplace. Senegalese brotherhoods have supported both national and international trade expansion – particularly the Senegalese diaspora in Europe – and have informal but influential links to local and central government (interview with Lakh). One of the oldest unions, the Union Nationale des Commerçants et Industriels du Sénégal (UNACOIS) was created in 1990 and influenced by brotherhoods, as a response to traders' frustrations with a state-controlled monopoly over rice. It now has 100,000 members and has strong ties to the government, playing a consultative role to the government's economic council (Scheld 2010). The Dakar Chamber of Commerce is an exclusive membership club for powerful wholesalers, the *grands commerçants*, who act as spokespeople for the traders (Lyons and Snoxell 2005). Other important players in Dakar are the Lebanese merchants who, until independence in 1961, were the main importers of manufactured goods to Senegal, although they are now being displaced by Chinese and other merchants. An unusual feature of Senegalese market associations is the importance of brotherhoods and ethnicity in both formal and informal trade (Scheld 2010).

It is important to note that in Senegal, artisanal processing of milk, maize and other products make processed food available for low-income consumers in cities at affordable prices. Processing can be made with imported or local products depending on availability and affordability. The thousands of corner shops play a crucial role in making food accessible for the many. Bread consumption and particularly '*la baguette*' has strongly increased over the past years. Wheat is mainly imported and processed by medium and large bakeries. In 2005 the Minister of Commerce tried to regulate bread distribution to reduce prices for consumers while ensuring hygienic conditions in the distribution. Three thousand special licensed kiosks were supposed to provide bread in Dakar without much success; corner shops continue to carry out most of the distribution (Dabo 2009).

2.3 Levels of export dependence

Since economic liberalisation in the 1990s, Senegal's agrifood exports have increased and diversified. The volume of exports doubled and value tripled between 1998 and 2004. The main agricultural exports are groundnut products, cotton and horticultural products (melon, cherry tomatoes, mango, and green beans).

² Brotherhoods (*confréries*) are groups organised by ethnic, religious and family ties. These groups constitute 'social capital' and are important for commercial and political relationships.

Diversification is also taking place in market destinations. Although the EU is still an important market for Africa, mainly for primary products, China, other emerging economies and Africa are considered to have greater potential in the context of regional trade agreements and less demanding standards (Amoako 2012; Collier 2012; Brenton and Isik 2012). Intra-Africa trade has grown at five times the rate of trade with EU markets in the last 30 years. The Senegalese domestic market for FFV is also growing.

Export horticulture has become a key component of national income; it is now the second largest provider of foreign currency per exported tonne in the agricultural sector after fish but ahead of cotton, groundnuts and phosphate products (Dia 2012). A support project (Agricultural Export Promotion Project or PPEA) has succeeded in aligning the interests of the biggest producers and exporter associations meet under the quality label '*Origine Sénégal*' (Matsumoto-Izadifar 2008). The Origine Sénégal Foundation was created as a public–private partnership in 2010 to increase the sector's competitiveness.

The pursuit of quality standards and competitiveness over the last ten years has translated into structural changes in the chain. Consolidation is a feature of the agro-exporting industry and there is increased vertical coordination between primary producers, suppliers and downstream buyers in the EU. Smaller exporters have dropped out, and three large companies now dominate market share. There has been a shift from smallholder contract-based farming to large-scale integrated estate production. This has altered the mechanism through which local households benefit – increasingly through labour markets instead of product markets. From 2000 onwards, the incidence of contract farming decreased – from 23 per cent in 2000 to 10 per cent in 2005 – while that of wage employment on estate farms increased sharply – from less than 10 per cent of households in 2000 to 34 per cent in 2005. As a result of the supply chain restructuring in the period 2000–2005, 72 per cent of contract farmers lost their French bean contracts. Almost half of them (43 per cent) started to work on estate farms. The exporting firms that dissolved the contracts either exited the market or started their own estate production. Studies indicate that poverty is 14 per cent lower due to vegetable exports; the impact on poverty reduction being stronger as the poorest benefit relatively more from working on large-scale farms than from contract farming (Maertens *et al.* 2007, Maertens *et al.* 2009).

Senegalese exporters are challenging the dominant foreign-owned exporters who control over half of FFV exports. When the Compagnie Fruitière Française set up its own shipping company, the Coopérative Fédérative des Acteurs de l'Horticulture du Sénégal (CFAHS) lobbied and succeeded in having taxes at the

Dakar port harmonised to level the playing field for all exporters. CFAHS criticised the lack of 'inclusivity' of the big exporters, accusing them of importing everything for their business (machinery as well as seeds and fertilisers that could be procured locally) and creating only low-quality employment and not engaging with small-scale farmers. In the near future, global and mainly foreign-owned chains will need to be more inclusive in terms of local procurement and employment as competition with national exporting food chains develops.

2.4 Levels of import dependence

Population growth and rapid urbanisation in the past decades have increased food imports of key products including rice, powdered milk, onions, tomato concentrate and wheat. Imports of rice covered the deficit left by prioritising groundnut exports over local cereal production. Imports have led to changes in diet and taste preference, particularly in urban areas.

Rice imports can adapt more rapidly to growing demand and can be supplied all year round. The rice market is very concentrated. In 2008 it was estimated that five importers controlled 81 per cent of the volumes traded in the country. They have an important influence on price for both imported rice and local cereals (AGVSAN 2010). Onion is the most important horticultural product in terms of production and consumption. Onions are produced in the Senegal River Delta and Niayes region. Imported onions arrive mainly from Holland (Wade and Ndiaye 2009; Wade 2008). Tomato for producing concentrate is the second industrial agri-food product after rice. The industry is growing fast as demand increases. Farmers' produce is bought by the Société de Conserves Alimentaires du Sénégal (SOCAS) which manufactures double-concentrate tomato purée (Duteurtre and Fall 2008). Two other processing industries have appeared over the last five years but they import triple-concentrate tomato purée from China that they turn into double-concentrate for the local market (Diop 2011). Traditional milk production is oriented mainly to home consumption (80 per cent of milk in rural areas). Sixty per cent of national demand for milk and dairy products is covered by imports of powdered milk. The main milk suppliers in 2012 were France, New Zealand, Ireland, Brazil and Morocco. Urbanisation and growing demand have contributed to the creation of peri-urban dairies around Dakar which have invested in better cows and intensification. Also in intermediary cities like Tambacounda and Kolda, dairies have introduced improved collection systems from farms as well as processing techniques to ensure quality and safety (Dièye 2003; AVSF 2011; interviews with Diaw and Balde).

2.5 Policies to improve self-sufficiency, food security and local chains

During the presidency of Abdoulaye Wade (2000–2012), declarations on food security, self-sufficiency and food sovereignty dominated the political scene. The hunger riots of 2008 certainly contributed to reshaping the food-security framework in the country, and in adopting the principles of the 2009 World Summit on Food Security (FAO 2009) final declaration.

Since the early 2000s there have been clear policy intentions to couple the fight against poverty and food insecurity with economic and social development. The publication of the Economic and Social Policy Document (DPES 2001–2015) marks a paradigmatic change in making that link. Evaluations of programmes like the National Programme for Local Development (PNLD) are done in relation to their contribution to economic and social development, and reduction of poverty and food insecurity. Another key element of policy change was Senegal's membership of the New Alliance for Food Security and Nutrition (NASAN) in 2012, an initiative promoted by the G8 summit in Camp David in May 2012. The objectives and priorities of the National Programme for Agricultural Investments (PNIA 2011–2015) are built on these new concerns.

Flagging these issues was certainly important as food insecurity had increased and previous food policies had proven inefficient (Ba 2008; Lallier and Minvielle 2005). The promotion of Senegalese agriculture was proffered as the main means to achieve food security. Several special programmes on key products were initiated: sesame, maize (2003), cassava (2004), and hibiscus tea. Some programmes have succeeded (cassava) while others have failed (sesame).

A more general programme to increase and diversify agriculture and livestock production was set up after the re-election of Abdoulaye Wade (2007). Finally, following the 2008 hunger riots, the ambitious 'grand offensive for food and abundance' or GOANA (*grande offensive pour la nourriture et l'abondance*) was launched in 2008 but a good balance was not achieved (Jullien 2012). For Macky Sall, the new president elected in 2012, avoiding a food crisis and ensuring food security (availability) remains the first priority while reducing food prices (affordability) is the second (Carayol 2012).

Significant efforts have been made by the government over the last ten years to increase national production: price stabilisation (groundnuts, onions, sugar); direct subsidies (groundnuts, flour mills, agricultural machinery, inputs); elimination of producers' debts (rice); VAT exemption (inputs for poultry, dairy products); and sanitary embargoes (chicken after the

avian flu) (Fall *et al.* 2008; La Gazette 2014). Important policy innovations have been made to regulate markets in a more inclusive way through the Agency of Market Regulation (ARM) which has forbidden imports of some products during the periods of the year when local production is abundant. Legislation has been passed to promote and support the notion of 'inter-professions' – linking all actors involved in a particular chain (eg, producers, transporters, distributors, importers, exporters). In this way the government expects 'co-constructed' regulations to be at the heart of public–private partnerships. Inter-professions in the tomato, onion and poultry chains have been working relatively well. For example, local onion production rose from 70,000 tonnes in 2003 to 250,000 in 2013 while prices paid to producers increased from CFA 75–100 to CFA 250 per kilo in the same period (Frenk 2013; Wade and Ndiaye 2009).

The period 1980–2000 was also marked by civil society – in village associations, producer organisations and NGOs – rapidly developing their voice, supported mainly by cooperation interventions. Since 2000, business organisations have also been organised by profession and by specific chains or 'inter-professions' linking all actors. They participate in market organisation and regulations and lobby to defend their interests. They participate in the ARM.

Importers stress their role as 'food availability facilitators' when opposing government market regulation policies that restrict the quantities and time of year that imports can enter the country. A clear example is that of sugar. In Senegal there is only one sugar production unit, the Senegalese Sugar Company (Compagnie Sucrière Sénégalaise, CSS), which has a monopoly over imports. Local production does not cover the national needs and importers contest the CSS monopoly. National production is 100,000 tonnes and national consumption 180,000 tonnes. Many retailers also smuggle sugar from Gambia or other neighbouring countries through their traditional and ethnic arrangements (Dabo 2009). In June 2013, the retailers' union UNACOIS accused the CSS monopoly of working against the people's needs mainly in the period of Ramadan. Fourteen thousand tonnes imported by UNACOIS were blocked at the port of Dakar (Agence de Presse Senegalaise 2013). Retailers thus engaged in a battle with the government, arguing that it was impossible for them to ensure affordable prices for consumers under the import regulations for sugar and rice.

Onions provide another example of the challenges associated with availability and affordability. Imports have been forbidden during the months when national products are available. Problems with importers and retailers still persist and prices often increase because of speculation on the availability of this product. The Minister of Commerce has highlighted the need for

agreements among all actors involved in this chain in order to guarantee better incomes for producers and an affordable price for consumers.

Significant progress has been made, particularly since to the creation of ARM. Import controls to support national production and regulate prices have increased production of onions, tomatoes, and milk while a ban on poultry imports in response to avian flu has contributed to the sector's development. Trying to harmonise interests of all actors in the chain from national producers to importers, food processors and retailers has not been easy.

Researchers, NGOs and farmers' organisations promote and lobby for local chains based on small-scale farming as the path to ensure employment, increase incomes, and capture more value for local people through increased production, transformation and trade of local products (Hrabanski and Pesche 2011; Action Contre la Faim 2013). Senegal's horticultural region of the Niayes comprises many medium and small farms which are oriented to the local rather than export market, and which benefit from growing urban demand for FFV. Production, transformation and commercialisation offer opportunities for many rural and urban people. Peri-urban agriculture in this region has created 30,000 jobs. This includes direct employment in production, input supply, agricultural machinery supply and maintenance, the transformation and commercialisation of artisanal products, and street-food vending, which is important for women's incomes (Ba 2004). Debate around the performance of local chains is associated with competition from imports and the negative impacts of international trade agreements and the EU Common Agricultural Policy (Fontan Sers 2010).

But in policy terms, local chains are also associated with public investment and support. Local chains are often poorly structured and managed, they have high post-harvest waste losses (30–40 per cent), lack storage facilities, and price volatility can make them uncompetitive. Transport costs are important to develop local chains. In the absence of substantial investment in infrastructure, transport costs to reach the populated coastal cities will not be competitive with imports arriving at the port of Dakar even if levels of production are increased (Goossens 1998). Global chains can act and react faster to changes as investment is mostly private. Some private–public structures help local small and medium-sized enterprises (SMEs) to access export markets.

The evolution of the economic environment due to trade agreements has also changed the protection levels set up for some local chains, though all agricultural products are protected to some degree. Under the Economic Community of West African States (ECOWAS) Common External Tariff (CET), just over half of agricultural tariff lines are placed in the 20 or 35

per cent tariff band, the two highest bands of the CET. By comparison, the previous tariff for concentrated tomato was 43–56 per cent.

2.6 Consumer preferences for local versus global food

Consumer habits are rapidly changing in association with growing urbanisation. Although low purchasing power is a primary determinant of food choice, consumers' willingness to pay depends also on safety, freshness, taste and other preferences. One important trend is the consumption of processed food, since people, and women in particular, cannot afford to spend 4–5 hours preparing a meal. In cities more food is being eaten outside the home, at street stalls and restaurants which are proliferating (Sall, Bricas in Grain de Sel 2012; interviews with Ndiaye, Mbaye and Seck).

Local fruit and vegetables are highly valued for their quality, freshness and affordable prices in the cities that border the Niayes horticultural region (Ba and Moustier 2010). From the consumer's side there's a strong perception that some imported products are better, despite many efforts to persuade them of the benefits of local produce (Bricas 2006; interviews with Ndiaye and Wade). Imports are always available even if they are a little bit more expensive (mainly rice, milk and onions) (interviews with Ndiaye, Mabayé and Wade). Imported food quality (milk, rice, onions) is controlled by the sanitary authorities at arrival at the port of Dakar, while local food is mostly not, as government lacks the capacity to enforce such regulations. This is one of the reasons why many state that imported food is 'healthier' than local food. Besides, particularly in Dakar, imported food is appreciated for other reasons such as ease of preparation, long shelf life and taste. Imported rice is preferred for its taste and also because it cooks faster thus reducing the cost in fuel and time (interviews with Ndiaye, Wade, Ba and Lamine). Imported onions are preferred as local onions are said to contain too much water and their quantity reduces in the pan when cooked; imported onions can be stored for longer periods of time (interview with Wade).

Food preservation is certainly a point to consider when trying to understand consumer preferences regarding local or global chains, such as powdered milk versus fresh milk. Low-income consumers in general do not possess a refrigerator or good storage facilities at home. This situation explains the importance of the thousands of corner shops and street vendors who make food (both local and imported products) available and affordable for the poorest all year round. They provide a quality service to their customers, being in the right places, opening until late and even facilitating credit; they are the end distribution channels for local and global chains (Dabo 2009).

There have been some attempts by universities and civil society organizations (CSOs) to run campaigns to promote local, healthier consumption, including 'My milk I like it local' (ISRA-BAME 2009a, b); to promote new products such as sesame (Amrom 2012); or to promote local/national products and gastronomy like the AfroEats Festival, an event created by the Minister of Commerce, Industry and the Informal Sector of Senegal to increase value and transform local production into good cuisine to contribute to economic development and poverty reduction (APS 2013). The main dilemma for different actors in food chains is not just changing consumer behaviour but also ensuring that healthier food is affordable for the poorest. Decades of food imports have shaped consumer tastes and preferences. Challenges to the status quo are happening in emerging and better-structured national sectors (milk, FFV and even street-food vendors). But most remain in their informal circuits based on established relationships; to progress and increase their sales they would need to adapt or change their commercial strategies (Broutin 2004, Grandval *et al.* 2012).

2.7 Striking a policy balance

The debate on local versus global orientation in agrifood policy has been polarised between 'for' or 'against' market liberalisation, and local versus global chains in relation to land use, food security and food sovereignty. Balancing the needs of importers and local producers and processors is always high on the agenda of government (Dièye *et al.* 2005; Duteurtre *et al.* 2005). It creates tensions and often contradictory policies and regulations. The milk case is a good example. Since price spikes in 2007–2008 imports have increased by lowering customs barriers, but at the same time there has been investment in a vast programme to increase national milk production (PRODELAIT). But the EPA negotiations certainly added to the tensions between actors and affected the capacity of the government to maintain and develop pro-national policies.

While the differences between local and global food chains are important in Senegal, complementarity appears to be important too. Local food chains are complementary to imported food since national production cannot cover domestic demand in key products, and national income depends on both import and export taxes. Moreover, decades of imports have altered tastes and increased demand for imported products such as rice and onions, and bread, the latter in turn leading to increased wheat imports. Local and global food chains are both valued from a job creation perspective. Global export food chains are facing greater competition for supply as national and local economies grow. Better local chain organisation and product and market diversification are creating a feeling of 'resource nationalism' that changes the rules of the game.

From a position of radical opposition to free trade agreements, especially the EPA, Senegalese farmer leaders have adopted more nuanced positions (Hrabanski and Pesche 2011). Representatives from the private sector, together with farmers' organisations and NGOs, participate in the EPA national sub-commissions where the list of 'sensitive products' was agreed. They all lobbied to have their products and chains on the list according to their specific interests (Agritrade 2010; interview with Ndiaye).

Policy interventions in Senegal in local and global food chains face an important challenge regarding perspectives on cost and benefits. There is political willingness to support and promote local chains to ensure national self-sufficiency, but the government cannot afford the necessary investments to make this possible. Supporting large import or export chains has the benefit of bringing investments and tax revenue to the national economy. Small to medium national and local food chains are seen as a cost as they require mainly public investment and support to bring them into the formal economy. Some increasingly assertive voices are starting to contest this view, arguing that formalisation of SMEs can contribute to a larger tax base if they have secure markets to sell their produce.

Peru: local and global – as long as they ensure economic growth

In Peru, formal global food chains cater to changing consumer demands and generate tax revenues. Yet many see local food chains as more socially and environmentally sustainable. What are the roles of global and local food chains in contributing to economic growth, in supporting food security, health and local producers – and where are the synergies between the two?



3.1 Context

Society and economy have fundamentally changed over the last twenty years in Peru. After the structural adjustment reforms of the 1990s and a decade of violence that cost 70,000 lives, mainly in rural areas, life is more promising for Peruvians. Political stability, the opening of markets through a range of free trade agreements, incentives for foreign and national investments and an increased demand for minerals from China and India have brought rapid economic growth. Exports of minerals but also agricultural products have been promoted and supported. Incomes have risen and a new middle class, albeit still vulnerable, has developed. Urbanisation has progressed and people's aspirations for the future have changed. Yet despite the positive statistics (see Box 1) there is much concern from civil society organisations and parts of academia about the viability of the growth model.

This is particularly the case regarding agriculture and food. What is at stake for many is the economic growth model that the liberalisation process has ushered in, and its viability in a context of growing resource scarcity (land and especially water) and a largely unskilled rural population which still partly relies on small-scale agriculture for its livelihood. There are

divergent rationales for acknowledging and supporting this population of small-scale farmers: as the guardians and providers of Peruvian biodiversity that underpin the boom in gastronomy; or as suppliers to agroindustry for modern domestic and export markets.

Food demand is growing: the total population is increasing by 350,000 inhabitants per year and incomes are improving. Expenditure on food in Peru has increased as has the imported component of food – mainly food providing calories and proteins (bread, pasta, oils, chicken and eggs). The poorest have become more vulnerable. Even in 2010, figures showed that 28.4 per cent of Peruvians had calorific deficits and 9.8 per cent did not have enough income to buy basic food products (*La Revista Agraria* 2011). According to official sources, 13.8 million Peruvians are food insecure (Mimdes 2010). Peru is 48th out of 105 countries in the Global Food Security Index (Economist Intelligence Unit 2012). Although under-nutrition has decreased by 20 per cent since 1990, many regions, particularly rural, remain highly vulnerable. Concerns about international price volatility and climate change are also contributing to a rethink of future food security. Food availability is not a problem in Peru (Villahermosa 2013) but affordability often is. Infrastructure and connectivity to be able to sell and buy in markets are important (Webb 2012).

BOX 2. PERU – IMPORTANT NUMBERS

Population

- 30,469,221 in 2013
- 75% urban – 25 % rural 2013

Growth, development and poverty

- 6.4% average growth per year since 2002: 9% in 2009; 6.8% in 2011
- GDP per capita US\$3,936 in 2011 compared with US\$1,698 in 1999
- Ranked 36th out of 183 countries in Doing Business 2011 report
- Ranked 80th out of 187 countries by UN Human Development Index indicators in 2011
- 23.7% of the total population living in poverty in 2011
- 250 banking and finance institutions present in rural districts in 2011, 91 in 2001
- Middle classes have increased from 15% of the total population in 2003 to 20% in 2011

Agro exports

- 21% growth in the agro-export sector between 2001 and 2011
- 3% out of 5 million hectares of agricultural land dedicated to agro-exports
- 10% contribution of agro-exports to the country's total exports

Business structure

- 98% of businesses are micro and small enterprises and account for 40% of GDP and 76% of the working population – 75% are informal
- 2% are medium and large firms that account for 60% of GDP – they are all formal, contribute 98% of exports and 100% of the direct taxes collected by the state (10% of the top companies contribute to 71% of total taxes)

Sources: Apoyo Consultoria (2012), Peru 21 (2011), World Population Review (2013), CEPAL (2013), INEI (2011).

Besides the quantitative aspects of food security, academics have also been trying to put the quality aspect of food – the nutrition component – on the policy agenda since the late 1970s (Amat and Curonisy 1979). More recent studies highlight the big changes in consumption as more people are eating outside the home (39 per cent of Peruvians eat out at least once a week – McCann 2012) and industrially processed food has affected consumers' health and food preferences. When at home, Peruvians spend 40 per cent of their food budget on processed food.

Peru's economy stabilised after the Latin American debt crisis in the 1980s. During the 1990s, inflation was kept below 5 per cent thanks to structural reforms, deregulation, fiscal restraint and international loans (Economist Intelligence Unit 1997 and 2008). The government of Peru created a business- and investment-friendly environment with its 1991 Foreign Investment Promotion Law, which legalised unrestricted private foreign land ownership and investment and outlawed discrimination between foreign and domestic investors.

The process of economic liberalisation that began in the late 1980s has changed the role of the state. Since then governments have put all their efforts into creating an enabling environment for business competitiveness. Civil society organisations that have emerged and proliferated since the 1970s have been important actors in strengthening human rights and political democracy. The transition to an open market economy meant that value chains and inclusive business have been the tools of new interventions. Often, NGOs have taken the role of the intermediary and service provider to link small-scale farmers to business in many supply chains (Fovida 2010; SNV 2008).

3.2 The food industry, structure and ownership patterns

Economic growth, rapid urbanisation and an increased demand for food quantity, quality and diversity have attracted more businesses into the agri-food sector. This business environment and liberalisation of the land market in the 1990s supported producers and agricultural entrepreneurs who bought land to develop mainly export crops such as asparagus, artichokes and grapes with state-of-the-art technology and organisational standards. They have concentrated ownership not only of land but also water. In 2009 they controlled 225,657ha – 90 per cent on the coast where 33 owners produce asparagus, sugarcane/ ethanol, grapes, mangos, avocados, citrus fruits, paprika and artichokes; and 10 per cent in the Amazon region where one owner (Grupo Romero) produces palm oil (*La Revista Agraria* 2009).

But most land is still in the hands of small-scale farmers. The latest agricultural census found that land has in fact fragmented into more and smaller units. Small farms of less than 5 hectares totalled 1.8 million in 2011, a 40 per cent increase on the number recorded in the 1994 census. These small farms account for 82 per cent of the total agricultural units. They produce 70 per cent of the country's food (CENAGRO 2012). This situation constitutes the main argument of many farmers' organisations, academics and NGOs to support family farming as a key component of food security and local economic and social development (Oxfam 2013a).

The food processing industry has developed as internal consumption of processed food grows. From 2008 to 2012 food industry sales have been growing by 8 per cent annually as people consume more processed food. Food processors are investing and expanding their factories to serve rising demand. There are oligopolies in staple foods like pasta and oils (Alicorp has a 45 per cent market share of wheat flour, 40 per cent of pasta and 60 per cent of vegetable oil sales) and poultry (San Fernando has a 54 per cent market share of chicken and egg sales). Both companies are heavily dependent on imported wheat and maize (Lajo 2011). The agrifood processing industry is concerned about the price volatility of cereals (*Peru 21* 2012) and is interested in increasing national production; some companies have engaged in contract farming with small-scale producers.

Sales of fresh and processed food amounted to US\$2.8 billion in 2010. Most agricultural produce arrives at traditional local open-air markets or wholesale markets through a series of intermediaries. Santa Anita, Lima's wholesale market, supplies 70 per cent of fresh produce; big wholesalers control the distribution of basic products like onions and potatoes (del Pozo-Vergnes 2013).

Supermarket expansion has been important, expanding not only in Lima but also in other cities of the country. There were 57 in 2001, and by 2012 there were 134 supermarkets in Lima and 34 in other cities (*La Republica* 2012). They have captured 20 per cent of the fresh produce market in the last 15 years (Chau 2009). Between 2001 and 2012, 3,094 small street retailers disappeared, the majority of which were located close to supermarkets. But local open-air markets and corner shops are still important. In Lima there are 1,200 open-air food markets and they are fighting hard to compete with supermarket expansion (Hernandez de Agüero 2013; America TV 2013). In 2012, even when food sales through supermarkets had increased to nearly US\$3 billion, traditional retail markets sold US\$20 billion of produce (USDA 2013). Lima Municipality, together with the federation of open-air market workers has established a programme to improve the competitiveness of those markets (Municipalidad de Lima 2012).

Large food enterprises comply with sanitary obligations and are easy to control but this is not the case for the majority of food processors who are mainly small and micro enterprises. Peru has made progress on legislation for food safety but still only 10 per cent of companies are controlled due to a lack of financial and human resources but mainly to a lack of political will.

Initiated by renowned Peruvian chefs in the early 2000s, gastronomy has become one of the most dynamic value chains, accounting for 4.2 per cent of GDP in 2013. The number of restaurants is growing at the rate of 10 per cent since 2001; 48 per cent of restaurants are in Lima. According to a recent report, the Peruvian 'gastronomic boom' has directly or indirectly benefited 5.5 million people all over the country: 61 per cent in agriculture, 5 per cent in industry, 10 per cent in trade and transport and 24 per cent in food service (APEGA 2013). One of the main contributions of the gastronomy boom has been to value and make visible farmers' work, to value and defend biodiversity,³ and to create a feeling of pride and strengthen national identity (APEGA 2013). The Peruvian Gastronomy Society (APEGA), an alliance of chefs and farmers, has been set up. Producers are recognised as the first ingredient of Peruvian cuisine as they supply the basic and typical products required (Ginocchio 2013). But for most farmers, the gastronomic boom is not generating rapid and stable growth in their incomes because chefs buy small quantities daily or weekly in order to ensure freshness. The consumption of natural products from Peru's large biodiversity base are especially promoted and big industrial food processors have created a boom in processed pepper sauce whose recipe has been endorsed by APEGA's founder and leader, chef Gaston Acurio (Business Empresarial 2012). The gastronomy movement led by APEGA has generated support from academia, business, producer organisations and government. For President Ollanta Humala, Peruvian gastronomy needs to conquer more countries by increasing food exports but he also highlights also the need for good and healthy Peruvian food to reach the poor – particularly the huge number of undernourished children in the country (Humala 2013).

3.3 Levels of export dependence

Peru is a mining country, and this sector accounts for 59 per cent of exports and 14.5 per cent of GDP. It is also the sector that contributes most taxes (30 per cent of the total paid by enterprises) (Macroconsult 2012). Governments and policies prioritise support to the extractive industry and economic considerations over social or environmental issues. The same applies to agricultural exports.

Exports of traditional agricultural products (cotton, sugar and coffee) have fallen. But over the past two decades, Peru has emerged as a significant fresh fruit and vegetable (FFV) exporter. Although Peru's export boom began with asparagus, the country's export portfolio has expanded to include such diverse products as processed artichokes, avocados, bananas, citrus fruits, grapes, mangoes, onions and paprika. Peru's fruit and vegetable exports amounted to US\$60 million in 1990, 550 million in 2002 and 3.3 billion in 2013 (La Republica 2013a). Export products have diversified even more to include seaweeds, and two new stars: blueberries and quinoa.

The rise in exports in the 1990s was driven by the suitable climate (mainly in the desert coastal region), low production costs (mainly labour), preferential trading arrangements (the Andean Trade Preference and Drug Eradication Act – ATPDEA) and USAID support to exporters to enter the US market (Meade *et al.* 2010). Other elements behind this rise of exports were the shift of commercial farms from the production of traditional crops (cotton, sugar) to more profitable crops.

Peru is becoming a serious FFV competitor in international markets, affecting other players such as the US in the asparagus market (Meade *et al.* 2010). But at the same time, it has to compete with other emerging players like Mexico or Morocco. Distance, energy, resource constraints, rising labour costs, poor roads, high port costs,⁴ climate change and new or the expansion of plant diseases (La Republica 2013b) are the challenges in coping with the rapid growth of the agrifood export sector maintaining its competitiveness.

³ APEGA together with many CSOs has been very active in lobbying the government to pass the law banning GMO imports in the country. One of the main arguments was the harm that GMOs could do to biodiversity, which is what supports Peruvian gastronomy and economic growth (La Republica 2011).

⁴ Callao, just south of Lima, is the country's most important port but also one of the most expensive ports in the world. The average cost of exporting one container from Peru is US\$800 compared with an average of US\$510 from Chile and US\$660 from Costa Rica (Meade *et al.* 2010).

Support from the government and supportive policies and institutions have been key. Proactive and reactive efforts of the public and private sector to overcome bottlenecks associated mainly with phytosanitary issues are certainly noteworthy in terms of compliance with market access requirements. The ability to ensure a reliable supply of quality and safe produce has been one of the pillars of the success achieved by the Peruvian asparagus and other food industries in international markets. To support agro-exports, all governments since the 1990s have engaged in the improvement of the National Service for Agrarian Health (SENASA) which has allowed exporters to overcome safety challenges to comply with international requirements and food standards (*La Republica* 2013c). Organisations of exporters by product and representative national structures – such as the Agricultural Producers Guild Association of Peru (AGAP) and the Exporters' Association (ADEX) – have allowed exporters to respond to their collective needs and promote a highly professional agro-export culture. Horizontal coordination has had an important impact. Frío Aéreo Asociación Civil (an association of civil air freight exporters dealing with chilled foods) was created in 1998 by a small group of agro-exporters to address the problem of breaks in the cold chain due to the lack of cold storage facilities in Lima's airport. In 2010, 29 companies were members of the association, representing 70 per cent of the industry. Frío Aéreo boasts the largest cold terminal in South America and around 77 per cent of the total Peruvian exports of perishable products dispatched by air pass through its cold facilities (Meade *et al.* 2010).

As for market destination, despite economic downturn the US and Europe are still the main markets. Nevertheless, over the last six years exports to Asia, mainly China, have increased rapidly and in 2013 accounted for 41 per cent. Other interesting trends are the growth of South American markets (8 per cent) (*La Republica* 2013d) and the growth of exports towards the United Arab Emirates (41 per cent) comprising grapes, asparagus, beans, white giant maize from Cuzco and canned milk (*La Republica* 2014). Since the 1990s, all governments have supported fruit and vegetable exports, considering them to be important levers for the country's economic development. New institutions and policies have focused on creating the necessary enabling business environment by facilitating access to natural resources (land and water), foreign direct investment and also cheap labour through special legislation to keep the sector competitive. A major effort over the last ten years has been the opening and diversification of markets through the establishment of free trade agreements or other types of commercial partnerships. Since the signing of the United States-Peru Trade Promotion Agreement (PTPA)

in 2006, Peru has also signed trade agreements with many regional economic communities and countries: EU, MERCOSUR, Canada, Japan, Thailand, China, Singapore, South Korea, Mexico and Chile. Others are also in negotiation (SICE 2014). In 2013, 95 per cent of agro-exports went to countries who had signed a commercial agreement with Peru.⁵ The Minister of Foreign Affairs, the Chamber of Commerce of Lima and President Ollanta Humala encourage the participation of Peruvian exporters in important international food market events such as the Gulfood in the Middle East in February 2015.

3.4 Levels of import dependence

Free trade agreements have been signed with many countries, facilitating both Peruvian exports and imports. Import tariffs have been reduced on average from 70 per cent in 1988 to 3.2 per cent in 2012. Three-quarters of products can enter the country now with zero taxes; included among these imports are important agricultural inputs for basic products (wheat, maize, oils). Nevertheless, Peru still imports only 11 per cent of its agricultural products. These are mainly basic inputs for mass consumption products: wheat (bread and pasta), yellow maize (poultry feed), and soya (cattle feed and oil). The main foreign providers are Argentina (wheat, maize and barley), Canada (wheat, barley and peas), Bolivia (bananas, beans and quinoa) and the United States (wheat, peas and potatoes). Smaller suppliers are China (maize and sweet potatoes), Germany (potatoes), Ecuador (bananas), Colombia (maize), Uruguay (rice) and the Netherlands (potatoes) (Zegarra 2013).

3.5 Perceptions of food chain performance: local versus global

Narratives and debates around the performance of local and global food chains in Peru vary. The contribution of food chains to national and local economies is important in the debate and this translates into policies, investment and support from both government and international cooperation programmes. Exports of fruit and vegetables, imports of inputs (like maize for the poultry industry) and public procurement in a context of promoting national gastronomy each show the differences but also the relationships between both global and local chains. Discourses and perceptions vary according to where actors in the different spheres place the emphasis in relation to food-chain

⁵ See <http://www.promperu.gob.pe/>

performance. Many academics and NGOs consider local and short food chains to be better for ensuring food security and health, while global chains, and particularly food imports, are perceived as a growing threat in the context of price volatility in international markets. For the government, efforts are concentrated in supporting global and/or local chains as long as they contribute to economic growth and income generation, and people's health and nutrition.

Exports may contribute to more employment and thus higher incomes to better access food: 'One tonne of asparagus can buy 10 tonnes of wheat' (Cilloniz 2013). But many academic, civil society and trade union actors highlight the poor social and environmental performance of fruit and vegetable agro-exports (interviews with Alvarado, Vasquez, Castillo and Zegarra). Employment from FFV exports has certainly increased notably in regions like Ica or La Libertad where important agrifood companies operate, contributing to local economies. But working conditions, especially for women, who make up the majority of the labour force in these industries, is said to be far from decent (REDGE 2012; Velazco and Velazco 2012). The special law for agricultural workers, Law 27360 of 2000, to keep costs low and support competitiveness in export industries, has been extended until 2021. But economic growth and increased employment possibilities – such as in construction – have pushed up salaries in the agricultural sector. Agrifood exports are labour intensive and finding workers is becoming more difficult and more costly.

Around 40 per cent of agrifood exports are grown in the desert. In Ica, 95 per cent of water is consumed by agriculture, asparagus accounting for 35 per cent (Rendon Schneir 2009). Better water management techniques and diversification to less water-demanding crops are being studied by the private sector and the government; an agreement has been signed with Israel to improve Peru's water management systems (Andina 2012).

There is growing concern about the negative impact of food exports on food security. The quinoa case has drawn much attention as export prices have risen over the last five years; small-scale farmers in the poorest regions where this nutritious Andean cereal grows prefer to sell it rather than eat it. In 2008 producers ate between 2.5 and 5 kilos per year; in 2013 they ate only between 0 and 3 kilos. Quinoa has become scarce in the domestic market and prices are unaffordable for many; from a traditional and cheap cereal it has become a gourmet product. Over the last five years the quinoa price in Puno, the main production region, has increased by 70 per cent (Laqui 2013). According to industrial processors, only mass production and industrialisation can ensure food safety and lower prices

for domestic consumers, and this is what Alicorp is trying to do in Peru, engaging in quinoa production and processing (interview with Quinde).

There is growing criticism of targets to increase imported raw materials for processed food which points to the power of food processing oligopolies in basic products. Consumption of processed food has increased over the last two decades. In 2010 processed food consumption accounted for 40 per cent of household food expenditure while fresh produce consumption stood for 26 per cent in the coastal region, 32 per cent in the Andes and 40 per cent in the Amazon region (Gonzales 2012). Another criticism of imports is that the government greatly reduced taxes between 2006 and 2009 during the tax reform process in the context of free trade agreements. Of the total imported value in 2010 (US\$29.9 billion), 73 per cent had zero import taxes. Importing oligopolies are blamed for not transferring cost reductions to consumers after 2011 when international prices were lower after the 2008 economic crisis and when they already benefited from tariff-free imports (Lajo 2011).

Growing food demand and higher incomes are opening up more possibilities for local chains. The gastronomic movement and the promotion of national and traditional food diversity has contributed to the recognition of the importance of local food chains for the economy, culture and health. Under the slogan of 'eat well, eat healthily, eat Peruvian' '*Come rico, come sano, come Peruano*', Peru's gastronomic movement, civil society and state agencies are promoting healthy cuisine based on local products (MINSA 2013).

Local chains are perceived as more environmentally and socially sustainable but many claim that small-scale farming is not economically viable. Ideology and political positions are significant in the perceptions of different actors in the public, scientific, market and policy spheres. The land issue is reappearing in the context of food security: land for exports or to feed the country? Food availability and affordability, the contribution of food chains to national and local economies and the rising concern about health, food quality and nutrition are acknowledged as important issues.

3.6 The examples of rice and chicken

Rice and chicken (*arroz con pollo*) is one of the most popular dishes in Peru. Contrasting opinions and perceptions appear in relation to the contribution of the rice and poultry food chains to local and national economies. There are several factors that have contributed to the increase in imports. These include growing urbanisation; greater demand for quality and for

poultry products; international market price volatility and exchange rates; and increasing resource scarcity and fluctuations in production due to climate change. These factors have also caused concern among business and government about substituting imports with local production, so as to be less dependent on imports.

Peruvians, particularly in the coastal regions, are big rice eaters, consuming 63.5kg per capita in 2012. Rice is second only to potato in terms of production and consumption. Rice imports accounted for less than 7 per cent of consumption before 2007 and this was mainly high-quality rice targeting high-income consumers in Lima. However, imports have greatly increased since then and lower-quality varieties are flooding into the country following the signature of trade agreements when import taxes were reduced to zero (Vasquez 2011; Zegarra 2013). According to the president of the National Association of Rice Producers (APEAR), imports tripled between 2011 and 2013. The problem is not that national production cannot cope with growth in consumption and demand. Of the 3 million tonnes produced in the country, only 1.8 million are sold in Peru because imported rice is often cheaper. Domestically produced rice spoils in storage because of a lack of suitable facilities. The association has demanded that the government stops imports during the months when their produce is available, but they were told this was not possible because the trade agreements the country had signed had to be respected: the national market must remain open and free of tariff barriers (Silvera 2013). Producer associations were actively fighting against the FTA with the USA during the negotiations in the mid-2000s fearing 'unfair competition with subsidised American rice' (Oxfam 2006). But the threat has come rather from Peru's closest southern neighbours; distance matters in market competition.

Unlike the national dish of *ceviche*, which is made from fish, chicken is emblematic of the global diet. Chicken meat consumption increased by an annual average of 9.4 per cent between 2005 and 2011. Chickens are fed hard yellow maize (referred to simply as maize in the remainder of the report) for which national production is low compared to white maize which covers national needs (the Cuzco variety, with its local certified label 'Giant maize from Cuzco' is increasingly exported).

Maize accounts for nearly 70 per cent of the poultry industry's cost structure. Argentina provides most imported maize. Maize imports accounted for 47 per cent of national demand in 2000 and 57 per cent in 2012 (Huamanchumo de la Cuba 2013). The import bill for maize increased from US\$93 million to US\$543 million in that period because of price spikes in international markets. Price volatility has led the industry to promote national production and to lobby the government to support it.

The maize import market is oligopolistic; four companies control 67 per cent of the market. Collectors, transporters and traders buy maize from producers and ensure the supply to the feed and poultry industries. San Fernando is the biggest poultry industry with 35 per cent of market share valued at US\$1.65 billion in 2012 (USDA 2013). For the whole sector, the main problem is perceived as informal chicken enterprises which take 20–25 per cent of the market but do not contribute to the national economy as they pay no taxes. The major companies are formal and have the financial capability to buy large volumes in national and international markets. The 180 formal companies in the poultry industry are organised around the Peruvian Association of Poultry (Asociación Peruana de Avicultura).

Over the last twenty years national maize production increased by 162 per cent following increasing demand from the poultry industry. The maize price has an important impact on the cost of living for Peruvians and the competitiveness of the poultry industry because higher costs are transferred to consumers in the price of chicken and eggs (Zegarra 2013; Lajo 2011). The chicken price has become a sort of inflation indicator which consumers and government follow closely as this is the most consumed meat in the country. In terms of employment the contribution of maize is important too. In 2011 half a million hectares generated 52 million daily wages, estimated to be equivalent to 144,000 permanent jobs. In addition, the poultry industry employs 280,000 people directly and more than a million indirectly, including in roast chicken restaurants. The poultry industry with an average turnover of US\$1.6 billion per year accounts for 2 per cent of the national GDP and 22 per cent of agricultural GDP (Fuentes and Valero 2012).

Maize seed imports have been increasing, accounting for 37 per cent of all imported seeds in Peru. But in 2011, Law 29811 prohibited imports and national production of GMOs for ten years. In 2013, maize seed imports dropped by 67 per cent. Debate on the pros and cons of the law is lively in Peru: academics and CSOs are largely in favour of it and have received the support of chefs involved in the gastronomic movement defending Peru's biodiversity. Seed importers are of course opposed to the law, arguing that banning GM imports will have severe impacts on consumer prices and thus the national economy.

3.7 State food programmes: the milk case

The Qali Warma programme, which is at the heart of the government's social food programme, provides better food and nutrition, predominantly for children in its 47,000 public schools, while contributing to small-scale farmer incomes through direct procurement. When it was launched in March 2013, the programme raised much expectation from farmers' organisations. As in many other countries (FAO 2013) one major objective of this programme was to contribute to local economic dynamism (Andina 2013).

This programme has faced serious problems related to farmer inclusion and also food safety. Discussions between the Ministry of Agriculture and the National Farmers' Convention (CONVEAGRO) started early in 2013 to modify the procurement regulations to enable producers to offer their products directly to local procurement units throughout the country. Suppliers proving that they buy directly from producers were to have priority in the procurement process. For CONVEAGRO's president, there was an urgent need to break the old cartel that monopolised supply for the previous social programme, the National Programme of Food Assistance (PRONAA), and which claimed to be sourcing directly from local producers (CONVEAGRO 2013).

The Qali Warma programme replaced the old PRONAA after three children died in 2011 due to poisoned food. The new programme serves meals to 2.7 million children in 47,000 public schools in the country. It states that milk will be bought from local producers as long as their product quality is certified to avoid health risks to children. The Minister of the new Ministry of Social Inclusion (MINDIS) highlighted the need to consider that in most schools in the country – around 20,000, the majority of which are in rural areas – there are no storage, refrigeration or cooking facilities (Andina 2013). State milk procurement creates conflict between the big milk industry and local milk producer organisations. A decision by the government to buy 15,000 units of canned milk upset the Association of Milk Producers (AGALEP), which found this decision contradicted the objective of promoting local economies. The industry argued that small-scale producers cannot guarantee milk safety and that processed and canned milk were more suitable given the lack of refrigeration in most schools. AGALEP representatives pointed out that over the last twenty years 80,000 producers had been selling fresh milk to the previous PRONAA programme: in recent years they sold at US\$0.52–0.64 per litre and now the new programme was buying canned milk

at US\$1.09. The milk industry's response was that canned milk could be transported and stored without refrigeration, thus consuming less energy and that its higher economic value also guarantees good quality (Peru21 2013a).

The Qali Warma programme is quite new, and fighting old procurement arrangements is not easy. The minister in charge has resigned and new regulations are now being considered in order to make the procurement system more transparent and to ensure food safety.

3.8 Striking a policy balance

Peru is certainly doing well economically. But there is much concern about the sustainability of a growth model based on extractive industries and exports. The national debate regarding agriculture and food shows the disagreements but also the convergence of views of the different actors involved. Contributions to food security, to national and local economies and to people's health are closely interrelated issues around which food-chain performance is currently being assessed and which have set the framework for their future assessment. In an open market economy and in the context of international trade agreements, national policy sets out to ensure national production and healthy consumption while trying to produce and direct a surplus to international markets. The Peruvian government will back global or local chains in those efforts. But power relations matter. The good intentions of some ministers in favour of social inclusion, health or the environment have to be compatible with the economic growth model promoted by the Ministry of the Economy and Finance. At present, the main criterion for judging food-chain performance is its contribution to the economy and to the state tax revenue.

The orientation towards export and large formal companies is clear, since they pay taxes. But complying with trade agreements and competing with cheap imports pose challenges. New dynamic fruit and vegetable exporters like Morocco or Mexico are competing with Peru in Europe and the US. Exploring closer growing markets in Latin American or new destinations like Asia or even the Gulf countries is receiving more attention and policy support.

For many academics and NGOs, local and short food chains are perceived as a better option to ensure food security while global chains are perceived as a growing threat. One of the main arguments is the concentration of land and water in the hands of a few big export companies located in mainly water-scarce regions. They have been criticised for their social performance too. Another concern is the growing dependence on imported ingredients for processed food, and for

agro-inputs, including seeds and fertilisers. For their part, agro-exporters will highlight their contribution to employment and national and local economic dynamism and argue that with higher incomes people can buy the food they wish. Food processors and importers state that they contribute to lower prices for consumers while ensuring food safety because they comply with all standards, something that small local food chains – which are mainly informal – cannot guarantee.

Industrial food processing companies are adapting to satisfy this emergent but powerful national market through imports, but also through contract farming to lower costs. Inclusion of small-scale farmers, still significant in number, will certainly be an issue to scrutinise when assessing local and global food-chain performance. Safety issues are being cited to exclude small-scale farmers even from public food procurement programmes. The powerful gastronomic movement will have to show concrete results regarding any increase in small-scale farmers' incomes as per the objectives of APEGA's 'chef and farmer alliance'.

Amidst this Peruvian gastronomic boom, much concern has recently arisen about the quality of food; malnutrition and under-nutrition are still important issues and obesity is increasing. Eating healthier food is part of the national debate. Perspectives from CSOs, business and government vary on how better to improve diets and shape consumer behaviour. Organic production, a ban on junk food advertising, fewer exports of nutritious food and criticism of social programmes for buying junk food for children, are all issues that pit local food against global chains.

Recent studies have alarmed public health authorities and public opinion: 15 per cent of children, 20 per cent of teenagers and nearly half of all women in many regions are overweight or obese. Sixty per cent of Peruvians are overweight and 60 per cent of women between 15 and 19 years of age have impaired growth in terms of height because of under-nutrition (Mora *et al.* 2012).

For industrial food processors 'junk food' or '*comida chatarra*' (industrially processed food containing large amounts of fats, sugar and salt) is highly profitable because of low-cost ingredients for their production, their long shelf life and their relatively higher prices. It is estimated that processing companies invest US\$250 million in advertising per year while investment by the ministries of health and education to promote healthier food habits is less than 1 per cent of that amount (Jacoby 2013). Junk food is not just about big global fast food chains: in rural areas where they have not yet reached, rising incomes and changes in lifestyle mean that local natural food products are being replaced by pasta, white bread, fizzy drinks and table sugar.

Following criticism of imports of processed food and food additives, the Minister of Agriculture declared that the production of potatoes and Andean cereals would be increased to improve national diets. The promotion of the 'Andean diet' by the government and some NGOs involved or supporting the gastronomic movement (APEGA, Oxfam) does not resonate with an urban coastal population (where the majority lives) who are not used to and/or do not like Andean cereals (Miglio 2013; interview with Quinde).

In 2010, the government established a set of national standards to reform the offer of food in schools. One year later in 2011, important CSOs like the gastronomic movement and others joined efforts with the Ministry of Health and created a slogan to promote healthier food habits: '*Come rico, come sano, come Peruano*' – eat well, eat healthily, eat Peruvian. This slogan aims to promote social change and local agriculture, increase incomes and improve nutrition through the recognition of nutritional, environmental and social qualities attributed to Peruvian food and products (Jacoby 2013).

Looking forward: dynamics of change and policy dilemmas

Is the polarised debate over local versus global food chains outdated? This section offers a reality check, drawing on the case studies from Peru and Senegal. Both show that changes in domestic consumption, business and policy are reshaping global trade. The challenge now is to improve national food market governance and the performance and sustainability of both local and global food chains.



4.1 Local or global food chains?

As can be seen in the case studies presented above, different actors' perceptions present 'a new and complex reality that challenges ideological views about re-localising food production and consumption. They also reveal the dilemmas, the potential and the limits of national policies and food-chain practices in the context of market globalisation. The participation of both countries in global trade, through both agricultural exports and imports, brings interesting insights to the polarised debates between protectionism and free trade. Global and local food chains can oppose but also complement each other. Their performance must be assessed within a food security framework, in which issues such as the social and economic inclusion of smallholders, decent employment and environmental efficiency are examined in a context of climate change and resource scarcity. Rapid urbanisation and consumer aspirations are emerging as important issues in the current narrative. Changes in consumer behaviour and their preferences in terms of national and global diets are certainly contributing to reshaping food markets and trade.

4.1.2 Food security and food chains: a reality check

For low-income consumers price is important, but so are food safety, taste and ease of preparation. In Dakar even the poorest prefer imported rice, onions or powdered milk as they are easier to cook, tastier and/or easier to store for longer periods. Consumption of processed food is rapidly increasing, driven by fuel poverty, time poverty and lack of refrigeration facilities. In Dakar imported food is often considered healthier as sanitary controls are carried out in the port on arrival, while food produced and distributed in the country is not controlled. As incomes increase, more people are consuming chicken in Lima, thus increasing imports of maize feed. Changes in urban consumption, the expansion of domestic demand, price volatility in international markets and climate change are driving food processing industries to develop national production and ensure a supply of raw materials through contract farming.

National governments like those in Senegal and Peru face a number of political dilemmas in trying to ensure food security. They need to attract investments and raise sufficient taxes to support national economic growth; hence their interest in supporting agri-business exports or imports. They face pressures from their domestic farm lobby to regulate domestic markets and protect or support national production, but these clash with

trade policy commitments. They face pressures from (mostly urban) consumers to reduce food prices and liberalise imports of cheap food. They must deal with vested interests of strong traditional or ethnic groups controlling imports (Senegal) or wholesale markets (Peru). Political support for local or global chains (national or foreign) requires a thorough evidence-based analysis of power relationships and peoples' aspirations from production to consumption.

4.1.3 Governing informal food distribution channels

Most literature and global debate focuses on food production (small-scale farming, agro-industry) and consumption (over- and under-consumption). But in these action, research and policy agendas, and especially regarding how to feed the most vulnerable, the question of how the poor actually access food has been overlooked. While many ask the question 'how can we feed the world by 2050 within planetary boundaries?', it might be better to ask how people actually feed themselves and wish to be fed, to bring new perspectives into the development of policies and business interventions. Some clarity has been brought to this issue over the last decade by researchers exploring the boom in supermarkets in developing and emerging countries, inclusive business and the role of intermediaries in food chains. More recent findings have brought attention to the 'markets of the poor' (Vorley and Proctor 2008; Vorley 2013). Most food is traded in informal markets through a large range of big or small traders, corner shops and street vendors. While these informal markets provide access to food (fresh, processed or prepared) to the poorest in low-income neighbourhoods they are also the place where many of the middle classes prefer to buy food. The freshness and conviviality of open-air food markets and corner shops are deeply rooted in the culture of many developing or emerging-economy countries as well as in southern European countries.

From the policy side, there have been attempts to formalise food markets in Dakar and Lima – without much success. Policymakers face huge dilemmas when confronting deeply rooted informal arrangements, which are often supported by ethnic and/or economic interests. For governments in the global South, governing informal food markets is economically expensive and politically risky. On the one hand, they lack the financial and human resources to implement better food market governance policies, and on the other, there are important vested interests in terms of election politics. In these complex realities, most governments in developing and emerging economies have focused their attention on supporting large agro-industry firms, whether domestic or foreign-owned.

These large firms are less numerous and it is easier to deal with and/or control the sanitary quality of their products.

Large formal food chains are preferred because they can bring in investment and much-needed taxes to provide public services and infrastructure that can contribute to economic growth. Creating an enabling environment for big business is thus considered as an investment because returns are secured – mainly through taxes. Support to small businesses and/or local food chains is considered a cost as most of them are informal and do not contribute taxes. In Peru, formal food chains often claim unfair competition from informal chains, but at the same time large food processors acknowledge the importance of corner shops and street vendors for ensuring the distribution of their products – even to the most remote and poor neighbourhoods. Food safety requirements can exclude small producers and/or small informal food chains. As illustrated in the Peruvian case, even public food procurement for social programmes prefers to buy canned milk from one of the big national dairy firms rather than sourcing it locally from small-scale producers who, they say, cannot guarantee quality. In Dakar it is increasingly argued that formalisation of SMEs will contribute to a larger tax collection base, and that they would be willing and able to pay taxes if they had guaranteed markets in which to sell their produce. This emerging group of national entrepreneurs state that they can contribute to reducing food insecurity, poverty, malnutrition and youth migration. Supporting and improving open-air food markets and the millions of informal food traders and vendors that facilitate food access for low-income consumers is an important policy and implementation issue in times of growing urban demand for food quantity, quality and safety.

4.1.4 Growth, change and the new geopolitics of food trade

Crises and problems often present opportunities to rethink policies and practices. The 2007–2008 food crises and food safety scandals have led governments and businesses to seek solutions to secure supply at the right quality and quantity. Bans on exports to support national consumption disrupt world markets, drive price volatility and impact on food prices. This creates uncertainty in future supply. This situation is currently aggravated by recurrent droughts or floods putting pressure on available but increasingly scarce natural resources.

Countries' sovereignty over their food security has increased and their voice is stronger in WTO negotiations. But this has taken place in a context of proliferating bilateral and/or regional agreements. National interests may prevail but these are not contradictory to international trade. In fact, trade agreements reflect the new strategies governments in the South are trying to develop to ensure both economic growth and national food security.

As we have observed in Senegal and Peru, both countries are supporting local food chains through diverse market mechanisms (such import regulations or promoting gastronomy and local diets), at the same time as supporting agro-export diversification, both in new products and in new market destinations. Trade agreements and more agricultural exports are certainly contributing to economic growth and to employment, although labour conditions are often far from being decent. But governments are losing tax revenues through these trade agreements, as tariff barriers have been substantially lowered and are likely to disappear in the short- to medium-term. The price of some imported products is cheaper than domestic products due to lower taxes, affecting the competitiveness of domestic companies. Another important issue for the national food industries is market volatility and fear of supply shortages. To manage risks, the Peruvian poultry industry is developing contract farming to ensure their provision of yellow maize as domestic demand rapidly increases. Senegal is supporting its poultry industry, which prospered during the ban on imported chicken in the wake of the avian flu outbreak.

Despite many differences, both country case studies show that changes in domestic consumption, business and policy strategies are contributing to reshaping global trade. Export market destinations like the US or the EU are losing their dominant position in the face of increasing and diversified food demands from Asian and Gulf countries and, interestingly, also from African and Latin American regional economic communities. Better connectivity thanks to improved infrastructure is also allowing food and feed imports from neighbouring countries. South–South trade renders the old North–South dichotomy obsolete but there are still issues concerning fair competition and the stability and credibility of trade rules. International food trade is a key component of global food security. Global and local food-chain performance must be assessed against national and global concerns related to food security and safety, employment, natural resource constraints and environmental impact to make markets work for the many and in the long term.

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Abbreviations and acronyms

ADEPTA	Association pour le Développement des Echanges Internationaux de Produits et Techniques Agroalimentaires (ADEPTA) (Association for International Exchange and the Development of Products and Food Processing Techniques)
ADEX	Asociación de Exportadores (Exporters' Association)
AGALEP	Asociación de Ganaderos Lecheros del Perú (Association of Milk Producers)
AGAP	Asociación de Gremios Productores del Perú (Agricultural Producers Guild Association of Peru)
APEAR	Asociación de Productores de Arroz (National Association of Rice Producers)
APEGA	Asociación Peruana de Gastronomía (Peruvian Gastronomy Society)
ARM	Agency of Market Regulation
ASCOTEN	Association des Consommateurs du Sénégal (Consumer Association of Senegal)
ATPDEA	Andean Trade Preference and Drug Eradication Act
CFA	Central African Franc
CFAHS	Coopérative Fédérative des Acteurs de l'Horticulture du Sénégal (Federal Cooperative of Horticultural Actors in Senegal)
CONVEAGRO	Convención Nacional del Agro Peruano (National Convention of Peruvian Agriculture)
CSO	Civil society organisations
CSS	Compagnie Sucrière Sénégalaise (Senegalese Sugar Company)
EPA	Economic partnership agreements
FFV	Fresh fruits and vegetables
FTA	Free trade agreement
GOANA	Grande offensive pour la nourriture et l'abondance (grand offensive for food and abundance), Senegal
ISRA	Institut Sénégalais de la Recherche Agricole
JNC	Junta Nacional del Café (National Coffee Board, Peru)
MERCOSUR	Mercado Común del Sur (Southern Common Market)
MINDIS	Ministerio de Inclusión Social (Ministry of Social Inclusion)
NASAN	New Alliance for Food Security and Nutrition
ONAPES	Organisation Nationale des Producteurs Exportateurs de Fruits et Légumes du Sénégal (ONAPES) (National Organisation of Producers and Exporters of Fruits and Vegetables of Senegal)
PNIA	Programme National D'investissement Agricole, Senegal (National Programme for Agricultural Investments)
PNLD	Projet du Programme de développement local participative (National Programme for Local Development)
PPEA	Projet de Promotion des Exportations Agricoles (Agricultural Export Promotion Project)
PRODELAIT	Programme de Développement de la Filière Laitière (Dairy Industry Development Programme)
PromPerú	La Comisión de Promoción del Perú para la Exportación y el Turismo (Peru Export and Tourism Promotion Board)
PRONAA	Programa Nacional de Asistencia Alimentaria (National Programme of Food Assistance)
SENASA	Servicio Nacional de Sanidad Agraria (National Service for Agrarian Health, Peru)
UNACOIS	Union Nationale des Commerçants et Industriels du Sénégal (National Union of Industrialists and Merchants of Senegal)
WTO	World Trade Organization

Appendix 1.

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Ministerio del Ambiente (Ministry of Environment)

Reynaldo Trinidad, AgroNoticias Magazine

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Is it possible to re-localise food production and consumption? 'Old' market destinations are losing out in favour of new emerging markets. From being simple 'policy takers' developing and emerging economy countries are gaining sovereignty and becoming 'policy makers' – helping to reshape food systems and the geopolitics of food trade. Using case studies from Senegal and Peru, this paper examines whether local or global food chains are better at delivering food security and safety, decent employment, protecting the environment and contributing to economic growth. Both countries import and export food and feed. Both face policy dilemmas and are rethinking business interventions, juggling national food security, economic growth and international trade agreements while satisfying growing domestic and regional demands and new consumers' aspirations.

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Knowledge
Products