



THE CRAWFORD FUND  
*For a Food Secure World*

# THE SUPERMARKET REVOLUTION IN FOOD

**GOOD, BAD OR UGLY** FOR THE WORLD'S  
FARMERS, CONSUMERS AND RETAILERS?

The Crawford Fund  
2011 Annual Parliamentary Conference  
Parliament House, Canberra  
14-16 August 2011

*Editors: A. Milligan and A.G. Brown*





# THE SUPERMARKET REVOLUTION IN FOOD

Good, bad or ugly for  
the world's farmers, consumers and retailers?

The Crawford Fund  
17th Annual Parliamentary Conference

Parliament House, Canberra, ACT, Australia  
14–16 August 2011

Editors: Ann Milligan and Alan Brown

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## The Crawford Fund

The Australian Academy of Technological Sciences and Engineering established the Crawford Fund in June 1987. Named in honour of the late Sir John Crawford, the Fund commemorates his outstanding services to international agricultural research. The Crawford Fund is a non-profit, non-government organisation, dedicated to raising awareness of the benefits to developing countries and to Australia of international agricultural research. The Fund depends on grants and donations from governments, private companies, corporations, charitable trusts and individual Australians. It also welcomes partnerships with agencies and organisations in Australia and overseas.

The Fund promotes and supports international R&D activities in which Australian research organisations and companies are active participants. It supports the work of the Australian Centre for International Agricultural Research (ACIAR), the Australian Agency for International Development (AusAID), and the Consultative Group on International Agricultural Research (CGIAR) and other international research centres.

The annual Parliamentary conference is a key part of the Fund's public awareness campaign, which increases understanding of the importance and potential of international agricultural research, its achievements and needs.

The Fund also runs training programs that fill a niche by offering practical, highly focused non-degree instruction to women and men engaged in agricultural research and management in developing countries.

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# Foreword

The Crawford Fund's first Parliamentary Conference was in 1993. We have re-assembled almost every year since to focus on vital food security issues.

For 2011, the topic was somewhat outside the range of subjects of previous conferences. Past topics had usually lent themselves to analyses that pointed to the need for increased resources and production, mostly for biological research priorities. 'The Supermarket Revolution in Food', by contrast, was obviously about the operations of markets and food chains, and the program of speakers addressed a wide range of the issues impacting on markets and access to them.

For this conference we were particularly fortunate to secure President Kuroda of the Asian Development Bank to provide a high-level overview of the issues of social and economic development facing the region — the context in which the supermarket revolution is taking place. We are grateful that he found time in his busy program to visit Australia at our request. We like to think that his visit is in recognition of the importance of the heritage of that other great economist, Sir John Crawford, whose mission, of research for development for poor people, the Crawford Fund seeks to encourage.

Keynote speaker Professor Thomas Reardon, also an eminent economist, has authored much of the extensive socio-economic literature in refereed journals and has worked with CGIAR centres on the conference topic.

This conference followed the Government's response to the Independent Review of the Australian Aid Program, which gave high priority to investment in agricultural research and development. The Government is to be congratulated on the lead it has given in moving Australia's aid budget towards a target of 0.5% of Gross Domestic Product by 2014–2015 and of allocating priority to research for food security for the rural and urban poor of the developing world. These sentiments continue to be a matter of bipartisan political support in Australia.

The program of the conference included two Question and Answer sessions — opportunities to link issues of markets, research and new directions for the Australian aid program in response to the Aid Review. We were fortunate that the Hon. Margaret Reid, a former colleague, a member of the Aid Review Team and Chair of the Crawford Fund's ACT Committee, was at the conference and part of the Monday Q and A panel to help with review questions.

This conference produced numerous outcomes, including interesting and useful pointers to the way ahead for the agenda in international agricultural research.



The Hon. John Kerin AM  
Chair, The Crawford Fund

## SIR JOHN CRAWFORD MEMORIAL ADDRESS

### Food security in the Asian Century\*

The Hon. Dr Craig Emerson MP

Minister for Trade

#### Abstract



This Sir John Crawford Memorial Address touches on aspects of the balance between demand for and supply of food, and on visionary approaches to food security that emphasise the importance of markets as well as production itself. Sir John Crawford had the vision of Australian economic integration with Asia. We need to draw on his vision and do the right thing by Australian farmers, the nation and the region by meeting the food security challenge head-on through rational economic policy making.

The Sir John Crawford Memorial Address has been held since 1985, in honour of the distinguished Australian civil servant, educator and agriculturalist in whose name the Crawford Fund was established. Sir John was a remarkable Australian who contributed at the highest levels, and was a passionate supporter of international agricultural research for development.

Sir John Crawford was a mentor of mine at The Australian National University when I was undertaking my PhD course under the supervision of another great Australian, Professor Ross Garnaut. Sir John was always available to give me guidance about positioning Australia to take its place in the Asian region.

In delivering this oration just a day after returning from leading a 100-strong business mission to China, I am strongly aware of the boundless opportunities for further economic integration between our two countries.

In the second decade of the 21st Century, we confront a big, new land-use challenge — the issue of food security. It is entirely possible that the quest for food security will become one of the defining issues of the 21st Century.

Around the world one billion people already go to bed hungry every night: that is one in seven of our fellow human beings. Images from the refugee camps on the border between Somalia and Kenya are a daily reminder of the suffering in the Horn of Africa.

World food prices spiked in 2008; the price of rice trebled and the price of wheat and palm oil doubled. Food riots broke out in more than a dozen countries. Better seasonal conditions and the global recession caused an easing in food prices for a couple of years, but now they are surging again. Rising food prices have been a contributing factor in the Arab Spring, first in Tunisia, then in

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\* This is an edited version of Dr Emerson's address.

Egypt and now in several other Arab countries. Rising food prices explain much of China's 6.5% inflation rate, and Indonesia is worried about the impact of rising food prices on the poor.

Food shortages and high food prices would be a powerful force for instability within nations and potentially a source of conflict between them. Governments understandably will want to feed their people, and at affordable prices. If they cannot do so, food riots will follow and the instability witnessed in 2008 and now evident in much of the Middle East will spread to their countries.

Yet the response of many governments to rising food prices has been precisely the wrong one. Of 81 developing countries surveyed by the Food and Agricultural Organization, 25 applied export controls on their food production during the 2007–08 food price surge. While the role of speculators in food price rises has been greatly exaggerated, it is clear that the imposition of export controls has led to speculative activity that has amplified the price effects — to the great cost of the world's poorest countries dependent on food imports.

Now that high food prices have returned we must learn the lessons of recent history and respond in a rational way.

To determine the rational policy pathway we must first diagnose the problem. Rising food prices are not the product of speculation. Nor are they a temporary phenomenon, a consequence simply of poor harvests. Rising food prices are a market response to fundamental imbalances between the demand for and supply of food.

The world's population is forecast to reach 9.3 billion by 2050, an increase of 2.4 billion on today's level. As incomes rise, especially in Asia, demand for high-quality protein foods such as beef, pork, poultry and sheep meat will soar. If these meat types are raised intensively in feedlots, using grain for animal feed, the pressure on grain prices will be all the greater. Depending on the meat type, between 3 and 10 kilograms of grain would be needed to produce 1 kilogram of meat; and if they are raised extensively within high-population countries, land clearing will damage or destroy ecosystems and carbon sinks while releasing even more carbon into the atmosphere.

Though the natural instinct of governments of emerging economies will be to drive for self-sufficiency in as many basic foodstuffs as possible, they will tend to give the highest priority to self-sufficiency in staples such as rice and wheat. By doing so, they will create what economists call an opportunity cost. That is, to the extent that governments succeed in substantially achieving self-sufficiency in staple grains they will foreclose on opportunities to achieve self-sufficiency in other grains and in high-protein meat sources.

Pessimists and political opportunists see the desire for food security of major emerging countries as a threat. In truth, it is an unsurpassed opportunity for Australian farmers. Over the last quarter century Australia has established itself as a reliable supplier in meeting Asia's minerals and energy security needs. In the next quarter century Australia can establish itself as a reliable supplier in meeting Asia's food security needs.

In seeking security in minerals and energy supplies from Australia, importing countries such as Japan, Korea and China have not sought to own all of Australia's mines or energy sources. Rather, they have wholly owned some, taken equity positions in others, or acquired no equity and instead relied just on binding long-term contracts. So it can be the case with food security.

Attaining secure supplies of food does not of itself necessitate the purchasing of large areas of prime agricultural land, as some people would have you believe. It might involve our regional neighbours who possess large investable surpluses taking equity positions in existing agribusinesses. It might involve new joint ventures. It might involve some land purchases.

The history of pastoral development in Australia has not been dominated by Australian-only investment. At first British and then American investors brought in the foreign savings needed to develop Australian agriculture. Nowadays, our large agribusiness companies have extremely diverse ownership.

The world's need for food security to the middle of the 21st Century will open up exciting new commercial opportunities for the development of Australian agriculture. As the real price of food continues to rise, ideas will gain a commercial basis they may have lacked previously. Water catchment and conservation proposals that have been dismissed or never conceived at pre-existing food prices may become viable in a world seeking food security. At higher real food prices, technologies and infrastructure to lift the productive capacity of Australia's rangelands may come into play.

Rather than diverting existing food supplies into foreign investors' home markets, a visionary approach to the food security issue would involve growing more food from more productive land holdings in countries such as Australia. Alarmists warn that foreign investment in Australian agriculture to meet the region's food security needs will involve the export of Australian produce into those markets at below-market prices. However, no such proposal has ever been made.

As well as exporting food to international markets at international market prices, we should be doing everything in our power to ensure those markets function efficiently. Just as the imposition of export controls has exacerbated the food security problem, so have other interventions in the market.

Government support still accounts for 22% of the total receipts of agricultural producers in OECD countries. Farm subsidies in the United States and Europe are low at present by historical standards, owing to high food prices, but the budgetary costs are still huge. For the period 2007–09, farm subsidies in the US averaged US\$30 billion per annum, and in the European Union they averaged US\$128 billion per annum. What better time to lower them further and put binding limits on them?

The US Congress is searching for Budget savings to rein in the country's burgeoning public debt. Farm subsidies should be a prime candidate. So, too, should the European Union, many of whose members are heavily burdened with debt, be looking to cut its farm subsidies. And agricultural export subsidies, the scourge of the 1980s, could be eliminated by agreement in the Doha Round of multilateral trade negotiations.

Average tariffs on agricultural products in middle-income countries and high-income countries exceed 22% — four times the average tariffs on non-agricultural products.

Member countries of the World Trade Organization should be offering each other much better access to each other's markets for agricultural goods.

That none of this is happening is a real tragedy that throws into doubt the strength of the world's resolve to come to grips with the global food security challenge.

Through a visionary approach to meeting the region's food security needs, rural and regional centres could expand, boosting regional development in Australia and taking the population pressure off our big cities.

Developing regional Australia was the centrepiece of my 2006 book, *Vital Signs, Vibrant Society*. Now the market is creating the opportunity for that regional development to proceed. We should seize that opportunity instead of regarding it as a threat. At the turn of this century, mining and agriculture were being regarded as old economy, and the information technology revolution as the new, weightless economy. China's and India's transformational industrialisation and urban development have proved that analysis for mining to be wrong. And urbanisation and wider economic development in China, India, Indonesia and other parts of the Asia Pacific region will prove the analysis of agriculture as old economy wrong too.

Sir John Crawford had the vision of Australian economic integration with Asia. Let's draw on his vision and do the right thing by Australian farmers, the nation and the region by meeting the food security challenge head-on through rational economic policy making.

The Hon. Dr Craig Emerson MP, Acting Minister for Foreign Affairs (August 2011) and Minister for Trade, has been the Member for Rankin in Queensland since 1998. Apart from Trade, he has had federal portfolio responsibility for small business, competition policy, consumer affairs and deregulation. He has been a Post-Doctoral Fellow at the Australian National University and has around 20 publications to his name, including a book setting out a vision and plan for Australia's future. In addition to his work of more than 25 years in public policy, including with the United Nations, Dr Emerson has successfully run his own small business.

## Opening Address\*

Senator the Hon. Joe Ludwig  
Minister for Agriculture, Fisheries and Forestry



The Crawford Fund's work in promoting and supporting international agricultural research, begun in 1987, becomes more relevant with each passing year. I congratulate the Fund on its commitment to supporting developing countries, tackling food security and alleviating rural poverty.

### Challenges and discussions

This conference agenda covers plenty of ground in what is a very wide debate that impacts right across our community. Food and supermarkets are a universal issue.

As this conference clearly is designed to discuss, we should not underestimate the impact that the supermarket revolution has had on the production, supply and management of food — and also on the understanding of food.

The divide, or the gap, between the farm gate and the consumer is larger than ever, and it sits at odds with modern consumer trends. Consumers can purchase a wider range of products than ever before and are aware of foods, flavours and meals that were unheard of a generation ago. Yet the typical consumer now has much smaller knowledge of, and is much further from, the farm gate and food processor than were earlier generations.

I raise this dichotomy between food knowledge and food production knowledge not to indicate a problem but to paint a picture of this changing environment. At the same time, discussions around supermarket power in the marketplace continue, highlighted most recently by the pricing decisions taken by retailers on milk, bread and beer. Those price decisions raised the underlying issues of supermarket power, the bargaining positions of farmers and processors, and community views around the price and production of their staple items. The question of dairy pricing is before a Senate committee at present. I note also important work and focus that Hon. David Bradbury MP, Parliamentary Secretary to the Treasurer, is doing in regard to competition policy, including in this sector.

We all face the challenges of diminishing natural resources, climate change, skills shortages and an increasingly integrated global marketplace. The value that conferences such as this can bring is through the sharing of ideas among colleagues and also, I hope, solutions and inputs for policy makers.

These are significant challenges right across governments, and as Minister I look forward to continuing to work with industry and organisations such as the Crawford Fund on them.

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\* This is an edited version of Senator Ludwig's address.

### **Domestic food security**

In this country we are in the fortunate position of producing significantly more food than we consume. In recent years we have been able to export more than half of the food we produce, while still ensuring that around 98% of the fresh produce sold in Australian supermarkets is grown and supplied by Australian farmers.

However, even in our own country, where we have a consistent and reliable supply of high quality food, some challenges still remain. In particular, small and remote communities face high costs of freight and storage infrastructure, and their small size can make them unattractive to major retail outlets. I also understand that in our major cities and towns, information from not-for-profit organisations like Foodbank (a group that organises distribution of food to the needy in Australia) suggests that many Australians go without a consistent supply of food.

Of course environmental conditions and natural disasters can also threaten food supply, as we have seen during the extraordinary natural disasters early this year.

As you consider these very important issues here today, know that they are of utmost importance to the Government and high in our policy development priorities.

### **National Food Plan**

The Australian Government is working to develop Australia's first National Food Plan, which links food security issues with a whole-of-supply-chain approach.

While there are currently many government policies, programs and regulations relating to food, these are not reflected in a single overarching national food policy. We need innovative and collaborative solutions that reduce regulation and ensure better integration of food-related policy across the supply chain, from producers to consumers and across all governments in Australia. A collective approach will help protect and improve Australia's enviable food security status, support population health outcomes and maximise food production opportunities.

The National Food Plan will be developed through a thorough, consultative and collaborative process and ideally will have input from all stakeholders in the food supply chain. Consultation also gives us a chance to examine the current regulatory environment across the supply chain to identify possible regulatory impediments and reforms.

### **Supermarkets and food continuity (Lessons from Queensland floods)**

The Australian Government wants to ensure that mechanisms are in place to support food production and food supply when disaster strikes: disasters such as those of the summer of 2010–11, with floods at the east coast and in Tasmania and at Carnarvon on the west coast, cyclones in Far North Queensland, and bushfires in Perth.

Australia's summer of disasters severely tested many food supply systems, as initial reviews and advice have shown, although there were no long-standing food shortages. Where the risks of significant food shortages were minimised in towns and communities it was through good business planning by the major organisations, in particular the retail and transport sectors, which were able to provide very effective services. While the disasters hit individual regions hard, there was a national food-industry response. Food-industry resources and supplies were mobilised from across the country to support affected areas. I saw the good work of Foodbank firsthand just days after the peak of the Brisbane floods and saw also the emergency management and planning of some major retailers — including relocation of South East Queensland cold storage facilities by the major supermarkets. Quick action from major retailers and not-for-profit groups alike meant that while there was some delay there were not long-term food shortages, particularly in vital fresh items.

The natural disasters also highlighted some weaknesses in the system. The strict 'just-in-time' nature of supply chain logistics means that, when problems occur, they have an immediate impact. Priority access to additional transport resources, fuel, and continuity of packaging supplies, and the need for agricultural producers to have access to feed supplies and transport to get produce (especially milk) to markets or processing facilities, are often overlooked.

A number of regulatory impediments hindered the response, including unnecessary enforcement of local trading hours and transport registration restrictions. Significant responsibility is delegated to local governments to respond to the food needs of those people in their communities in distress in times of crisis. The government is in the process of reviewing the lessons learned to see what might be needed to address identified and emerging issues. Food continuity will also be addressed as part of the development of the National Food Plan.

### **Global food security**

Touching briefly on global affairs, food security is at the nexus of many challenges confronting the international community, and it therefore requires a global response in which Australia must play an active role.

As the Crawford Fund knows and has long championed, multilateral cooperation is crucial to achieving successful outcomes. We have to work together, sharing information and streamlining processes as part of addressing the huge challenge of world poverty. The Australian Government has been engaged in the G20 Agriculture Ministers meeting and the United Nations FAO meetings in Rome. These forums are important for countries working together to lift agricultural productivity and meet growing demand globally for food.

In the current climate, in speaking about food security it is impossible to ignore the situation at the Horn of Africa. The images that have come out of that region demonstrate the global food challenge in a very confronting way. The Australian Government has made \$83.2 million in commitments to the

## Opening Address

region for emergency food and nutrition support, water and sanitation services, emergency shelter and protection for women and children in refugees camps, along with agricultural and livestock support.

### **Conclusion**

In closing, the Australian Government is keen to support a vibrant food industry across the entire supply chain to ensure the continued supply of high quality healthy food to Australians and the world.

With science, creativity, innovation, research and partnerships, we can continue to ensure long-term prosperity for our food production, processing and distribution industries, and take steps to improve food industries in developing countries.

The collaboration that is encouraged by organisations such as the Crawford Fund is important to ensure the food security of the most vulnerable communities. I commend the organisers and participants in this conference, and I am sure it will be informative and productive. I look forward to working with you all into the future.

Senator the Hon. Joe Ludwig, Minister for Agriculture, Fisheries and Forestry, a Senator representing Queensland, began his career as an Industrial Inspector and Training Consultant, before moving to the Queensland Branch of the Australian Workers' Union. First elected to the Senate in 1998, he was appointed to his current role in September 2010. Senator Ludwig has been Manager of Government Business in the Senate since 2007, having previously been Manager of Opposition Business in the Senate, 2001–07. He has also previously served as Minister for Human Services, Special Minister of State and Cabinet Secretary, Shadow Minister for Justice and Customs, Citizenship and Multicultural Affairs, Shadow Attorney-General, and Parliamentary Secretary to the Shadow Attorney-General and to the Shadow Minister for Homeland Security.

## KEYNOTE ADDRESS

# Markets and development

Dr Haruhiko Kuroda

President, Asian Development Bank

### Abstract



This Keynote Address gives a high-level overview of the issues of social and economic development facing the region. Markets have played a significant role in advancing economic and social development in developing Asia, in terms of structural transformation as economies move from agrarian and small scale economies. Structure and forms of markets also have evolved. Asia's agriculture and food systems revolution is one of the most illustrative examples. Moving ahead, a continuing strategic concern is about making markets work in the public policy interest of inclusive and sustainable growth.

I am honoured to join you for the 2011 Crawford Fund Annual Parliamentary Conference. Sir John Crawford is remembered as one of the great Australians who had clear vision and deep passion for the Asia and Pacific region. His pioneering contributions to development, including his service as the first chairperson of the technical advisory committee of the Consultative Group on International Agricultural Research (CGIAR), are among his lasting legacies.

His legacy lives on in the untiring endeavours of Australia to be a good international citizen. The Asian Development Bank (ADB) values Australia's consistent and strong contributions as a major shareholder and as a pro-active development partner in Asia and the Pacific.

The theme of this conference is relevant for ADB. I am pleased to know that Professor Thomas Reardon will discuss in some detail the supermarket revolution and how food supply chains can be a major force in bringing about food security.

To set the context, my remarks today focus on the broader topic of 'markets and development' — or more aptly, markets for development. I will emphasise the need to make markets work better for inclusive and sustainable development. I will also share what we in ADB are doing in this area.

### **Markets for development: Asia's experience and policy perspectives**

#### **Asia's past performance in growth and development**

In recent decades, Asia has made remarkable progress. The region as a whole achieved a growth rate of 7% in the 1990s and around 8.5% in the 2000s, and recovered swiftly from the 2008–09 global economic recession. This sustained, rapid growth has transformed Asia from an economic backwater to a global hub

of economic dynamism. And Asia has also made significant strides in poverty reduction, halving the incidence of poverty from 1990.

However, we must not lose sight of the huge challenges that still lie ahead. Despite its remarkable progress, the Asia and Pacific region remains home to the majority of the world's poor. Furthermore, the benefits of growth have not been equally shared, and disparities between the rich and poor are growing. The great challenge for Asia today is not only to maintain rapid growth, but also to steer growth towards a path that is more socially inclusive and environmentally sustainable.

### **Economic growth and markets**

As we know, economies do not grow smoothly and evenly. Structural change is a prominent feature of dynamic economic growth with traditional industries disappearing and new industries emerging. In the process, capital and labour move rapidly from sector to sector, and across borders. Such has been the case in many Asian countries.

Functioning markets with significant private sector participation support this process of structural change. Markets transmit timely information about changing demands and new business opportunities at home and abroad. Competition helps ensure appropriate pricing and the efficient allocation of resources, goods and services. Supported by open trade policies, economies can gain access to the global market. Development of trade and logistics infrastructure facilitates efficient physical movement of goods and services.

With the support of functioning markets, many Asian economies have indeed successfully managed the economic structural transformation from predominantly agrarian and subsistence economies to industrial and open economies. They have moved up from low productivity, low-skilled and low value-added industries to high productivity, skills-intensive and high value-added industries.

Let me share a few examples. For generations, poor farmers in the hills of southern Laos struggled to make living on subsistence farming, with little access to markets. In early 2000, however, the Government of Laos, with ADB support, implemented a Smallholder Development Project. This project aimed to improve rural livelihoods and develop market access through new all-weather roads and telecommunication services — and it has done just that. Since 2006, farmers have expanded their crops to organic cabbages and high-quality coffee. The cabbages are shipped to markets in Thailand, and the coffee is exported to Japan. As a result, an estimated 40,000 households have seen their incomes rise. Improved roads now connect farmers to newly-built markets on the Thai–Lao border, where traders buy produce in bulk. And farmers can now negotiate with faraway buyers through the wonders of text messaging.

Thailand's experience also shows the important role markets play in supporting agricultural and rural industrial development. As Thailand expanded its marketed agricultural surplus by exporting fresh and processed fruits and vegetables, farm cash incomes rose, which in turn provided the capital to fund rural industries. Thailand's poverty incidence declined from 38% in 1990 to less than 10% in 2006.

### **Role of public policies to improve market functions**

Given the fundamental importance of markets in supporting structural change and economic growth, what policy actions can governments take to ensure that markets function efficiently and effectively? Let me mention just a few, based on past experiences in the region.

First, policies are needed to encourage competition and to remove the barriers to both entry and exit of firms. This will facilitate the process of creative destruction. For small and medium firms — which are dynamic drivers of growth — a major barrier is the lack of finance with which to access export markets.

Second are policies that enable sufficient flow of information to minimise market transaction costs. During the food price hike in 2007–08, countries with large rice deficits panicked and bid up the price of rice because of the lack of transparent information on the rice trade. At the same time, rice-exporting countries banned exports to protect their domestic consumers.

Third are policies to ensure predictable returns on assets. Ownership of assets provides assurance of the returns on an owner's investments and protection against expropriation. This is critical for generating the incentives needed for market participants to invest and make the best use of resources.

Finally, as commercialisation of agriculture and the transformation of Asian economies continue, governments must also work to facilitate the integration of small-scale farmers into the broader markets. In this regard, we are seeing the emergence of innovative institutions and policies, often in partnership with the private sector and civil society. Some examples are the use of contract farming in the Greater Mekong Subregion, the development of farmer organisations and marketing hubs, organisation of the supply chain for high-value exports, and the use of modern communication technology to efficiently disseminate market information more widely.

Beyond these fundamental policy actions, there are other areas to which policy makers should pay attention for effective market functioning. This would include pro-active public investment in public goods, addressing market failures, and protecting the poor. The provision of safety nets, in particular, has become indispensable for maintaining public confidence and support for market-led outcomes, especially during financial crises and food price surges.

Innovative safety net measures have emerged that combine the support of the public and private sectors, civil society, and the international development community. These include conditional cash transfer schemes that provide food for work or food and cash for the continued education of children, especially girls, and mobile banking.

At the regional level, the ASEAN+3 countries are now expanding the regional reserve system to assist the rice-deficit member countries, especially in times of natural and economic calamities.

Public intervention is also needed to create incentives for environmental management, and to encourage the sustainable use of resources. For instance,

allowing the conversion of marginal lands into forest lands would make sense, because this contributes to carbon sequestration, watershed protection, and biodiversity conservation.

### **ADB's operations to make markets work better**

As a key development partner in Asia, ADB believes that the region has a bright future — that this can indeed, as many have prophesied, become 'the Asian Century'. For this to happen, however, the region needs to overcome some daunting challenges, including narrowing the growing divide between those who are benefiting from growth and those being left behind. Asia must aspire to more equitable and sustainable growth. Its larger footprint in the global economy brings new challenges, new responsibilities, and new obligations. Asia's growth strategy needs to be adjusted accordingly with regard to national actions, regional cooperation, and collective actions on the global agenda. Otherwise, Asia will fail to fully realise its potential for sustainable and inclusive growth.

It is particularly crucial to reach populations who remain excluded from the benefits of markets. As growth continues they may become increasingly difficult to reach, and disparities could widen within and between Asian economies.

For many countries in the Asia and Pacific, market access is limited. Where markets exist, often they do not function properly. A critical task is to identify opportunities and alternatives to develop and improve market access for the underserved, and to address market failures.

To help meet these challenges, ADB invests in infrastructure; the environment, including climate change; regional cooperation and integration; financial sector development; and education. We aim to maintain a good balance among these various areas to help markets realise their full potential for sustainable growth.

ADB also contributes to the aid-for-trade program in partnership with the World Trade Organization. This program seeks to develop and strengthen the capacity of low-income countries to effectively engage in international trade, which is crucial for raising incomes.

In view of emerging trends in market development, such as the supermarket revolution, ADB provides major support to build robust Asian food supply systems through infrastructure development. These investments help improve the productivity, connectivity, and resilience of food markets. Key infrastructure assistance includes irrigation and water resource management, roads, rail transport, information technology, renewable energy, climate proofing of infrastructure, and adaptation and mitigation measures. To complement these efforts, we work to foster south–south cooperation through subregional cooperation and integration. Through all of these, we are working to foster greater prosperity, and stability for Asia and for the world.

### **Conclusion**

In closing, I believe that the recent profound transformation of the global food retail system can be understood as the latest manifestation of long-term structural transformation. What this structural transformation means for food

security, agriculture development, and inclusive and sustainable growth is not yet well understood.

This conference provides unique opportunities to discuss such pressing and complex development issues. I wish you very productive and rich discussions during the next two days.

Dr Haruhiko Kuroda is the President of the Asian Development Bank (ADB) and the Chairperson of ADB's Board of Directors. He was elected President by ADB's Board of Governors in November 2004 and was re-elected in November 2006 for a new five-year term. Before joining ADB, Dr Kuroda was Special Adviser to the Cabinet of Japanese Prime Minister Junichiro Koizumi and a professor at the Graduate School of Economics at Hitotsubashi University in Tokyo. In a career spanning nearly four decades, Dr Kuroda has represented Japan's Ministry of Finance at a number of international monetary conferences as Vice Minister of Finance for International Affairs.

## KEYNOTE ADDRESS

# The global rise and impact of supermarkets: an international perspective\*

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### Abstract



A 'supermarket revolution' has occurred in developing countries in the past two decades. We focus on three specific issues that reflect the impact of this revolution, particularly in Asia: continuity in transformation, innovation in transformation, and unique development strategies. First, the record shows that the rapid growth observed in the early 2000s in China, Indonesia, Malaysia, and Thailand has continued, and the 'newcomers' — India and Vietnam — have grown even faster. Although foreign direct investment has been important, the roles of domestic conglomerates and even state investment have been significant and unique. Second, Asia's supermarket revolution has exhibited unique pathways of retail diffusion and procurement system change. There has been 'precocious' penetration of rural towns by rural supermarkets and rural business hubs, emergence of penetration of fresh produce retail that took much longer to initiate in other regions, and emergence of Asian retail developing-country multi-national chains. In procurement, a symbiosis between modern retail and the emerging and consolidating modern food processing and logistics sectors has arisen. Third, several approaches are being tried to link small farmers to supermarkets. Some are unique to Asia, for example assembling into a 'hub' or 'platform' or 'park' the various companies and services that link farmers to modern markets. Other approaches relatively new to Asia are found elsewhere, especially in Latin America, including 'bringing modern markets to farmers' by establishing collection centres and multi-pronged collection cum service provision arrangements, and forming market cooperatives and farmer companies to help small farmers access supermarkets.

A 'supermarket revolution' in developing countries started in the early 1990s and has continued to the present (Reardon et al. 2003). This revolution involves the rapid increase of modern retail shares in food retailing at the expense of traditional shops and wet-markets. In broad strokes, the supermarket revolution entails the following characteristics.

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[www.pnas.org/cgi/doi/10.1073/pnas.1003160108](http://www.pnas.org/cgi/doi/10.1073/pnas.1003160108).

First, the diffusion of modern food retail rolled out in three waves. The first-wave countries (in Latin America, Central Europe, and South Africa) tended to go from a small share (approx. 5–10%) of modern food retail in overall food retail in the early 1990s to some 50% or more by the mid-2000s. The second wave, in the mid- to late 1990s, was in South-east Asia (outside transition countries like Vietnam), Central America, and Mexico. The second-wave countries in Asia started later and reached a range of some 30–50% share by the mid-2000s. The third wave, in the late 1990s and 2000s, has been in China, Vietnam, India and Russia. In Africa outside South Africa, mainly in eastern/southern Africa, the supermarket revolution is just starting in some countries.

Second, the diffusion rolled out from large cities to small cities, from upper to middle to poorer classes, from processed foods to semi-processed foods to fresh produce, and from domestic local chains only to a multi-nationalised, concentrated sector.

Third, initially, procurement by modern retail was only from the spot wholesale markets, and few standards were used. Gradually, sourcing became increasingly direct from preferred suppliers, consisting of dedicated wholesalers, food companies, cooperatives, or farmers. Finally, distribution centres and national and regional networks (involving intraregional trade within a chain) were developed, using private standards. These changes rolled out from multi-national and large domestic chains eventually to smaller chains. They also rolled out from processed foods and semi-processed foods to their recent emergence in fresh produce.

We focus on three issues regarding the supermarket revolution, especially in Asia.

The first issue is *continuity in transformation*. Did Asian countries observed in the early/mid-2000s entering the third wave continue in it into the second half of the decade? The story of supermarket diffusion in Asia across countries was based mainly on data from 2005 and before (e.g. Reardon & Timmer 2007, Chen et al. 2004, PECC 2005). Many observers thought it unlikely that such a revolution would continue in Asia because of ingrained food systems and cultures not being conducive to supermarket shopping.

The second issue is *innovation in transformation*. Has Asia's supermarket revolution exhibited novel pathways of retail diffusion and procurement system change? The Asian conditions of the supermarket revolution are themselves unique in several ways. Although it is not unique in its traditional food retail system (with the same tradition of small shops, wet-markets, and hawkers shared in much of the world), Asia's economic growth and urbanisation rates are much higher, and the persistence of state presence in the economy as an actor is much larger.

At the same time, the rapid diffusion of modern retail in Asia implies the need for rapid procurement system growth and modernisation. However, the procurement system needs to evolve in a system in which traditional wholesale markets, relative lack of domestic agribusiness, high share of small farmers (relative to the overall economic growth and level of development), and sometimes (especially in South Asia) poor infrastructure are the rule.

The third issue is *innovation in development strategy*. Has Asia evolved novel development strategies to link its ubiquitous small farmers to dynamic markets, in particular those created by the supermarket revolution? Can these strategies be scaled up to supply retail chains while spurring development of smallholder farms in Asia and in other parts of the developing world?

### **Continuity in transformation**

We use indicators of modern retail sales growth to address the first issue. The table below presents data for 2001, 2005, and 2009 from Planet Retail, one of the leading retail data services in the world, tracking 7000 retail companies in 211 countries. It tracks in each country the leading retailers at a national level. The numbers are thus underestimates of the overall modern retail sector because in each country there are numerous regional and local chains and independent modern retailers that are not tracked. Our working hypothesis is that the leading chains present a picture of the general trends in the sector in each country.

We selected from their set 195 chains over nine countries: South Korea and Taiwan representing the 'first wave,' Indonesia, Malaysia, the Philippines, and Thailand representing the 'second wave', and China, India, and Vietnam representing the 'third wave'. The 195 chains include both chains specific to a country and multi-national chains (like Dairy Farm based in Hong Kong, or Tesco based in the United Kingdom). We selected only chains selling food. We used all such chains followed by Planet Retail from 2000 to the present. Of the 195 chains followed, 53 were not yet started in 2001 (and most of those are in third-wave countries, as expected); 25 of 195 that started the decade had been acquired or were bankrupt by decade's end (these are mainly in the first- and second-wave countries, as expected).

The main results are as follows. First, over the 8 years, there was fourfold growth in the total 'banner' (all products) sales of the chains: from 50 billion US dollars (USD) in 2001 to 200 billion USD. The rates of growth vary over the 'waves' as expected: the East Asian first-wave countries show slower modern-retail sales growth rates (a compound growth rate of 11.2% over the 8 years), the second wave in the middle (a compound growth rate of 17.9% annually), and the third wave the highest (40.9% compound growth rate), because the most recent starters advanced fastest, and the earliest were relatively saturated. There was variation over third-wave countries (with a sevenfold growth in sales over the 8 years for China, 20-fold in Vietnam, and 25-fold in India). The sales growth, particularly in India and Vietnam, rose in rapid crescendo from mid-decade. For India, 22 of 33 chains followed had not yet started in 2001; 17 of those 22 had still not started in 2005. Our calculations from Planet Retail data show that 75% of modern retail sales in India arose in chains formed only in the past 3 years. In Delhi, Minten et al. (2010) show that 85% of the stores started in the past 2 years.

The sales growth per country is composed of growth in the number of chains (as a chain 'graduated' to visible national status it was added by Planet Retail, the visible tip of the iceberg of the growing set of chains in the country), plus growth

**Table 1.** Sales of leading modern retail chains that sell food, and GDP growth, over selected Asian countries, over 8 years (2001–09), in billions of US dollars

Wave	2001 sales	2005 sales	2001–05 annual compound growth (%)	2009 sales	2005–09 annual compound growth (%)	2001–09 annual compound sales growth rate (%)	Real GDP compound growth rate (%) 2000–08	No. of leading chains followed
<i>First wave</i>								
South Korea	19.1	38.5	19.2	41.7	2.0	10.3	4.5	18
Taiwan	7.1	13.9	18.3	17.6	6.1	12.0	NA	17
<i>Second wave</i>								
Indonesia	1.8	4.0	22.1	7.3	16.2	19.1	5.2	14
Malaysia	2.0	3.5	15.8	7.1	18.5	17.2	5.5	16
Philippines	1.9	3.5	16.5	6.8	18.1	17.3	5.1	13
Thailand	5.4	10.9	19.2	17.7	12.9	16.0	5.2	21
<i>Third wave</i>								
China	13.1	40.2	32.4	91.5	22.8	27.5	10.4	47
India	0.2	0.9	45.6	5.1	54.3	49.9	7.5	33
Vietnam	0.1	0.7	62.7	2.0	30.0	45.4	7.7	16

**Source:** Authors' analysis of raw data in [www.Planetretail.net](http://www.Planetretail.net). The chains are all of the chains followed by Planet Retail per country, that sell at least some food; the service follows the lead chains at mainly the national level but not the local and regional chains, so the total of 198 billion USD in 2009 for example is an underestimate of the overall food-selling modern retail chains' sales in the countries. Because most of the retail sectors are still fragmented, this maybe a significant underestimate. There are no official data with which to compare. In-country estimates, for example by chain store associations, tend to show higher figures.

of the individual chains. The latter can be very fast among individual chains. For example, the sales of the top five chains in China grew more than 10-fold during those 8 years; sales in the top chain in India grew 140-fold in those 8 years and fivefold over just the past 4 years.

Second, although gross domestic products (GDPs) in Asia grew fast, and those in the third-wave countries the fastest in the world, the rates of growth of the sales of the chains were much faster, as shown in Table I. Thus, modern retail continues to gain share in overall retail.

### **Innovation in transformation**

The supermarket revolution in Asia has been driven by the same factors as in other regions: on the demand side by income growth and urbanisation, and on the supply side by foreign direct investment (FDI), format diversification to meet consumer segment needs, competitive domestic investments, and procurement system modernisation to drive down costs. However, several things were different in Asia. Especially for third-wave countries — China, India, and Vietnam — the trends have been more intense and more rapid. The third-wave countries in Asia also have active state involvement in economic development. In China and Vietnam, and to lesser extent India, state investment in modern retail provided a major initial fillip to the revolution.

Although supermarkets in other regions eventually moved from the initial urban base to rural markets and from the initial offering of mainly processed foods and staples into fresh produce, in Asia, especially in the third-wave countries, these transitions have been accelerated. Modern retail, either in modern private or state variants, has adapted to formats to penetrate rural areas, sometimes (as in India) combining with services for farmers. Relative to the United States and Latin America, Asian supermarkets have already started to penetrate fresh produce markets, perhaps because of the special importance this has for Asian consumers.

The combination of rapid retail transformation and supply-side constraints requires combining modernisation of procurement systems in ways done in other regions (distribution centres and networks, preferred supplier systems, use of dedicated wholesalers, and private standards) and adaptation to traditional supply chains, involving development of relations with wholesale markets. Beyond this dual approach is the gradual introduction of innovative procurement system and supply chain modernisation ‘solutions’ by agribusiness companies, sometimes in company with government and donors, such as with rural business platforms and hubs.

### **Nature and diffusion of modern retail in Asia**

Supermarkets spread quickly in the 1990s in Latin America and Central Europe and the first-wave countries of East Asia — much faster than the slow march of modern retail diffusion in the United States and Western Europe since the 1920s/1930s — but not close to how quickly modern retail has spread in Asia, especially in the third-wave countries, in the 2000s. The speed, continuity, and probable sustained development into the future are driven by several factors.

The first are the basic enabling demand-side conditions fuelling modern retail diffusion, which typically is a function of urbanisation, rising incomes, and women increasingly working outside the home. The very rapid income growth rates and the emergence of large middle classes in Asia are well known. The urbanisation rates are no less striking: for example, 40% of the US population was in cities in 1900 and 75% nine decades later, by 1990. That same shift occurred in South Korea in the two decades up to 1990 (Henderson 2002). The rapid development of Tier II, III, and IV cities, for example in India, has also been propitious for the spread of modern retail beyond the megalopoli (Reardon & Gulati 2008).

Enabling supply-side conditions also fuel the supermarket revolution; some of these are shared between other regions and Asia, and some are unique in form and/or extent in Asia. The great importance of retail FDI in spurring the supermarket revolution holds in Asia as in other regions. The policy process of liberalisation of retail FDI in the 1990s and 2000s that came with structural adjustment programs, with multilateral trade agreements, and for some, with full World Trade Organization accession (such as for China in 2004 and Vietnam in 2009) significantly assisted this role. Relying on the background raw data from Planet Retail, we calculate that for China, Vietnam, Thailand, Indonesia, Malaysia, and Taiwan, on average approximately three of the top six chains are foreign. Foreign firms are also important in the overall set, but because the chains are the leading chains, this may be an overestimate of their shares in the overall sectors.

However, even this shared characteristic of the importance of FDI seems to be more striking in Asia. Saturation and intense competition of the Western Europe and US markets, and nearing saturation in the earlier retail growth markets of the first wave, have focused global retailer attention on Asia as 'the last frontier' and other gold-rush terms. Kearney's (2010) 'Global Retail Development Index' ranking 30 developing countries in terms of the overall opportunity for retail FDI ranked China number 1, India 3, Vietnam 14, Indonesia 16, Malaysia 17, and the Philippines 22 in 2010. Compare these ranking with other BRIC (Brazil, Russia, India and China) countries: Brazil ranks 5 and Russia 10.

On the other hand, domestic retail investment has also proved to be a powerful force in Asia.

A key source of domestic investment has emerged from the economic boom itself and the large conglomerates linked with it. In India and the Philippines, laws restrict retail FDI, leading to predictions in India that the emerging retail revolution would be slowed or stopped. However, the following half decade showed an enormous increase in modern retail sales. In 2009 only 18% of sales of modern retail and 'cash and carry' (modern wholesale) (of those in Table I followed by Planet Retail) were by foreign firms (our calculation from Planet Retail data). By contrast, approximately half of the sales of Indian modern retail are from retail divisions of huge conglomerates that are rich in investable funds from two decades of very rapid growth in telecommunications, construction, oil, information technology, and other boom sectors (Reardon & Gulati 2008). An important share of the retail boom in the second half of the 2000s was the turn to retailing by giants like Reliance, RPG, Bharti, and Tata (a set of

four conglomerates with well in excess of 100 billion USD of sales); although the latter two have taken foreign partners (Walmart and Tesco) as ‘back-end’ partners allowed by current regulations, the rapid rise was driven by domestic investment and could continue so for years (Reardon & Gulati 2008). Even where retail FDI is not constrained, domestic conglomerates have played a key role: Lotte and Emart (with 21 billion USD in just retail sales between them) in South Korea have become regional multi-nationals with investments in China, Vietnam, and Indonesia. Hong Kong retail multi-national chains (Dairy Farm and China Resources) are number 1 in China and Malaysia and number 4 in Indonesia and present in India as an early entrant.

A second and unique source of domestic modern retail investment is by governments. Although chains from the socialist period have been mainly privatised in Eastern Europe, in Asia they have either persisted or have been proactively used to position domestic retail in competition with private domestic and foreign retail. India has state retail and cooperative retail forms helped by the state, such as the continued important presence of Fair Price Shops in state retail and the cooperative-modern retail chains, such as Mother Dairy (Reardon & Gulati 2008). In Vietnam, the number 2 chain is the Saigon Cooperative chain, a state-owned enterprise (SOE), the number 6 is Fivimart (SOE); in China, the number 2 (Lianhua with 10 billion USD of sales) is still partially an SOE. Outside these countries the SOE chain is largely absent (apart from the India case noted). Government investment and proactive policies, such as ‘Nonggaichao’ (converting wet-markets to supermarkets in China), the recent ‘rural supermarkets’ program in China (Hu et al. 2004), tax exoneration for supermarkets in South Korea, and wet-market regulation, demonstrate a tendency by a number of governments (in China, Taiwan, South Korea, Hong Kong, Singapore, and Vietnam) to view supermarkets as tools of modernisation. Even where there have been regulations to slow growth (such as in Thailand, Indonesia, and Malaysia) they have been vacillating, partially implemented, and side-stepped by local interactions and coopting of traditional retail, or format diversification, or both.

### **Early penetration of rural and fresh produce markets**

A series of innovations and precocities are largely unique to Asia. Although Asia echoes other regions in the spread of supermarkets to secondary and tertiary cities and towns and spread of modern retail from the middle classes to the working poor, there has also been a surprising development of rural supermarkets. Penetration of rural towns by modern retail came late in most countries outside Asia. By contrast, in India there are chains of ‘rural business hubs’ that are combinations of small supermarkets and input stores with joint venture banks and even health units in rural areas, such as Choupal Saagar or Hariyali Kisaan Bazaar. The market share of these new rural business hubs is still modest, but store numbers are increasing rapidly, such as one sees in the rapid growth of Hariyali outlets in the past several years. These forays seem to be driven by increasing rural incomes, the dearth of services, and the recognition that modern retail brings cheaper staple foodstuffs and nonfood goods (Chakravarty et al. 2007, Bell et al. 2008, Farhoomand 2008).

There has also been a surprising and precocious penetration of fresh foods retail. Although this is sometimes thought in Asia to be 'slow' because lagged and recent, in fact it is occurring earlier and faster than in other regions (including in the United States). Part of this is because of the importance of fresh produce in Asia, partly because there has been a format diversification into small neighbourhood stores 'early' (to link to frequent shopping habits), and partly it has been linked to efforts to modernise procurement systems early (discussed below) to drive down produce costs.

This precocity can be seen in its most surprising form in India, where in a few years the share of fresh produce in leading chains' store sales has risen to 10–15% (Minten et al. 2010), compared with that occurring only after some 15–20 years in Mexico (a country with a similar share of fresh produce in the diet as in India) and some 40 years in the United States (where supermarkets long did not 'touch' fresh produce, given the traditional habits of shopping daily at wet-markets and small shops that were thought insuperable). However, it is also seen in China, where Goldman & Vanhonacker (2006) found in a large survey in urban areas that modern retailers already have a retail market share of 37% in fruit and 22% in vegetables (compared with 79% in processed goods or 46% in meat). Compare that with the more advanced case of Hong Kong, where supermarkets have a 59% share in fruit retail and 55% in vegetables (similar to Brazil), compared with 52% in meat (CCRRC Asia 2005) and a majority of staples and processed foods. Additionally, Ho (2005) showed that supermarkets had only a tiny share of the rice market in Hong Kong in the 1970s and grew to dominate it nearly completely by the 2000s.

In Vietnam and Thailand, Moustier et al. (2010) and Gorton et al. (2009) show that food safety concerns of consumers, sensitised by recent food crises, are accelerating a turn to produce and poultry from supermarkets earlier than in other regions. In Vietnam, an 'early supermarket-penetration stage' country, Mergenthaler et al. (2009) found that both income and price elasticities of fresh fruit and vegetable expenditure from supermarkets were substantially higher than those for overall fruit and vegetable expenditures from traditional retailers. They attribute this partly to quality differentials between supermarkets and traditional retailers and partly to food safety concerns of Vietnamese consumers.

### **Food procurement system modernisation**

The following discussion focuses on impacts that modern retail has on farmers and processors.

Evidence on the impacts on consumers in Asia (and elsewhere) is reviewed by Minten et al. (2010) and Reardon et al. (2010). The essential points are as follows: (i) there is substantial emerging empirical evidence that supermarkets charge consumers less than traditional retailers for staples and processed products, from the early stages of penetration, and for produce, mainly in the later stages; (ii) there is incipient but inconclusive evidence as to the relation between a 'nutrition transition' to obesity from greater consumption of processed foods; the empirical base to test this has not yet been established; and (iii) there is mixed evidence regarding links between food quality and modern retail but clearer evidence concerning food safety and modern retail.

The modern retail diffusion described above, whether fast and/or along unique pathways, would not necessarily imply impacts on farmers different from traditional retail if modern retailers use the same procurement systems traditional retailers do, the wholesale markets. However, the evidence points to modern retailers increasingly using modernised procurement systems, at different speeds and pathways over the two product categories: (i) processed/staples, such as grains, edible oils, and packaged foods, and semi-processed products, such as meat and dairy; and (ii) fresh products. The implications for small food processing/manufacturing enterprises and farmers in the longer run are also significant.

*Procurement modernisation in processed and semi-processed products and staples*

This category often forms two-thirds of food consumed in Asia and sold by modern retailers. Procurement modernisation in this category seems to be happening early and rapidly in Asia, as it has elsewhere. There are several reasons for this.

The emerging evidence points to modern retailers sourcing processed foods, staples, and dairy from medium and large companies in the region. The latter have themselves emerged with the rise, formalisation, and consolidation (abetted by economies of scale) of the processing sector in many Asian countries in the 1980s and 1990s (more or less along the lines of the waves in retail change). These processes were spurred by FDI by global and regional multi-national chains and domestic (private and public sector) investment in agro-processing in the 1980s and 1990s (Wilkinson 2004). The multi-national food processors' presence spurred competitive investment and brand-building by national companies (for China, see Wei & Cacho (1999); liberalisation led to rapid capital-deepening in the food processing sector, such as in India (Ali et al. 2009)). A number of large domestic companies emerged, and several became regional multi-national companies, such as CP of Thailand, San Miguel of the Philippines, and Wilmar of Malaysia. Even in latecomers to food processing liberalisation, such as India, which 'dereserved' (from small enterprises) food processing only in 1998, there has been rapid consolidation and growth in the formal sector (Ali et al. 2009). It is likely this trend will continue because it is abetted not just by intensive investment, domestic and foreign, but also by regulations such as the emerging food safety regulations that will be difficult for many small enterprises to meet. Additionally, consumer sensitivity to food safety has been found to impel consumers to shift from wet-markets to supermarkets in, for example, Thailand (Reardon et al. 2010).

As in other regions, a 'symbiosis' is emerging between medium/large food processing firms and supermarket chains, which seems to lead to 'mutually reinforcing dual consolidation'. For a dairy example in Brazil and Argentina, see Farina et al. (2005). Retailers prefer medium/large processors because of lower product and transaction costs, ability to provide diversity of product types in a 'one-stop shop,' attractive packaging, formality of invoicing needed for value-added tax accounting and product liability, and brand development that attracts Asian consumers. Moreover, large processors are increasingly modernising their own distribution systems and have distribution centres and their own logistics,

or they promote and use the emerging modern logistics sector. For examples of the latter in India, see Reardon & Gulati (2008).

Sourcing efficiencies (such as buying direct from factories) and scale allow modern retailers to charge consumers prices below those of traditional retailers in processed/staple products. A recent study in Delhi showed that supermarkets charge lower prices for the key staples rice, wheat flour and edible oil than small shops (Minten et al. 2010). This is a common finding in other developing regions (Minten & Reardon 2008).

### *Incipient procurement modernisation of fresh produce and emerging impacts on farmers*

In a typical supermarket in Asia roughly 20–35% of the food sales are of fresh products — fresh meats, eggs, fish and produce (fruits and vegetables). Although meat and egg sectors are undergoing a similar consolidation in terms of the processors (e.g. Landes et al. 2004), produce tends to be predominantly produced by small farmers because they can undertake labour-intensive production of produce on small plots and earn substantially more per unit of land than they earn with basic grains. However, in a number of horticulture zones (such as discussed for India and Indonesia below), although small farmers dominate in numbers, it is common, at least in commercial agriculture zones, for medium and even large farmers to have most of the volume of sales in the market. Processes of land consolidation and rental market development seem to be underway in these zones and are leading to a differentiated farm sector. Even where smallholders dominate there is substantial differentiation in holdings of non-land assets. Supermarket chains thus have a choice over farm size and asset strata in sourcing, in contrast to the conventional image that there is a mass of undifferentiated tiny farmers producing horticultural products in Asia.

The fresh produce is mostly moved to supermarkets via traditional wholesale markets by many field brokers and wholesalers, as indicated by recent evidence from China (Wang et al. 2009), India (Reardon & Gulati 2008), Indonesia (Natawidjaja et al. 2007), Thailand (Schipmann & Qaim 2010) and Vietnam (Mergenthaler et al. 2009).

Procurement modernisation involves a shift from using spot markets to coordinated supply chains. In fresh produce this involves a gradual shift along a continuum of ‘technology/institutional/organisational’ modes. (i) The ‘most traditional’ sourcing system is the supermarket chain buying in spot markets at traditional wholesale markets and delivering store to store. (ii) The ‘early transitional’ is the mode whereby the supermarket works with a dedicated wholesaler which buys, sorts and grades, minimally processes, crates, and delivers in the wholesale market. (iii) The ‘modernising traditional’ is the mode whereby wholesale sectors and markets become more amenable for sourcing by supermarkets. There is some concentration among wholesalers and a displacement of ‘the first link in the chain’, the traditional field brokers (observed in India, China, Indonesia and others), with concomitant direct buying by wholesale markets from rural areas from cooperatives, mills or cold stores; emergence of grading and quality schemes in wholesale markets; and backward

linkage by wholesalers to rural areas (in assemblage). (iv) The ‘transitional modern’ is the mode whereby the dedicated wholesaler locates off-market and organises sourcing from farmers, applying private standards, and delivers to distribution centres of the supermarkets, which then on-deliver to stores. (v) The ‘most modern’ is the mode whereby the supermarket chains source directly from farmers either in chain–agribusiness relations or via collection centres from individual farmers and/or consolidators or cooperatives.

Which modes are used in procurement systems varies widely over countries in Asia, the product, the chain, and even the region of a country. In general, this process varies by country according to the wave; but controlling for the wave, other factors include (i) the efficiency of the wholesale markets (so that supermarkets rely more on them in China than they do, or want to, in Indonesia and India); (ii) multi-national companies and large domestic firms vs smaller chains; (iii) requirements of freshness and quality for specific products; and (iv) the availability of modern logistics/dedicated wholesalers and larger farmers and agribusinesses to supply produce. Leading chains have dedicated wholesalers sourcing from preferred lists of farmers in Indonesia (such as Carrefour using Bimandiri) and/or collection centres (such as Reliance does for 20–30% of its vegetables, the most perishable, in collection centres in peri-urban areas) and as does the Cargill Ceylon chain in Sri Lanka.

The Indonesia study (Natawidjaja et al. 2007) shows that among small farmers, those with greater non-land assets (especially irrigation) are included, as are those in marketing cooperatives. In the studies reviewed from India, where supermarkets directly sourced from small farmers (Singh 2009), the supermarket collection centres source disproportionately from medium/large farmers, except in the few cases in which effective marketing cooperatives have been organised by or for the small farmers, often with nongovernmental organisation (NGO) help (for the Uttarakhand case, see Minten et al. 2009).

Although the studies cited above tend to show that supermarkets at present (and for some time) can source from either medium farmers or asset-endowed small farmers, as the supermarket volumes grow there will be increasing need to source beyond the initial base. This will happen at sharply different rates over products and countries. Given the requirements of supermarkets in terms of quality, consistency and volume, this may then eventually pose a challenge to asset-poor farmers. Again, depending on the product and country, that may be near or far off in time. However, the innovative programs discussed below to facilitate the linkage with small farmers will be useful for that transition.

### **Innovation in development strategies**

As supermarkets spread in Asia and their sales expand much faster than GDP growth, they can draw on a rapidly growing, consolidating and modernising processing and milling sector in cereals, dairy, meats and condiments/sauces. However, fresh produce retailing, still in its incipience, puts strains on traditional produce supply chains because of its speed. That is a big challenge facing the chains trying to scale up procurement. There are two prongs to the attack on this problem.

First, governments need to invest in wholesale market systems and other market infrastructure. For example, the 2 × 100 Markets Upgrading Program launched in 2006 by the Ministry of Commerce in China targets the 100 leading wholesale markets and couples them with 100 leading food firms (including foreign firms like METRO) to act as ‘modernisation anchors’ in the wholesale market by improving the physical premises and the logistics of the wholesale markets to make them more efficient for the retail sector and more accessible to farmers (Reardon & Gulati 2008).

More specific strategies are also being developed to link farmers to dynamic supermarket channels. Policy makers, chains, NGOs, donors, and farmer associations in the region are creating programs (discussed below) for small farmers to gain access to the quality-differentiated modern markets epitomised by modern retail, and potentially raising incomes. Still, small farmers in Asia (and elsewhere in developing regions) are constrained by ‘idiosyncratic market failures’. Credit, input, information, and insurance markets exist, but small farmers often cannot access them on favourable terms. Small farmers are also constrained by their general poverty of assets, such as education and infrastructure, but also by specific assets, such as irrigation or specialised horticultural knowledge, needed to supply to modernising domestic and export markets. These are challenges facing all farmers in scaling up supply to modern markets; they are more difficult for smallholder farmers.

To meet this double challenge, unique development strategies are emerging in Asia. Some are shared with other parts of the developing world, but a number are unique to Asia and serve as interesting lessons for elsewhere.

First, and the most unique to Asia, is a family of development strategies being developed that involve assembling into a ‘hub’ or ‘platform’ or ‘park’ the various companies and services that link farmers to modern markets. These seem to be mainly emerging in India but may be useful nodal development strategies, for example for regional economic corridor projects underway in South-east Asia and southern Africa.

This hub approach is ‘bringing the markets to the farmers’ and provides the missing services (such as output procurement, processing/packing/cooling, technical assistance, credit and insurance) and products (inputs and equipment of requisite quality) required for small farmers to compete. This cluster of services is localised, benefiting from economies of agglomeration. Sometimes, fanning out from it is a set of collection centres or depots to which farmers deliver. This approach is designed to meet the input and service needs of farmers and reduce transaction costs by putting retailers and processors into rural areas, but provide the missing infrastructure and service base for the companies, which in turn make concomitant investment in packing plants and logistics facilities.

There are two variants of these hubs/platforms/parks.

The first variant is the mainly private and medium-scale hub, such as the chains of ‘rural business hubs’ of companies in India started in the mid/late 2000s (Chakravarty et al. 2007, Bell et al. 2008, Farhoomand 2008). The retailer, such as Hariyali Kisaan Bazaar and ITC’s Choupal Sagaar, sets up a rural hub, in which

it puts a small supermarket, an input retail shop, and sometimes procurement facilities for grain or milk or vegetables, and invites partners in the banking, insurance, and health sectors to set up 'store in store' units. This becomes a 'one-stop shop' for farmers and a procurement hub for other operations (such as business-to-business to other retailers or to processors or exporters).

The second variant is the 'public-private partnership' version of the above, such as the mega-food parks and integrated agrofood parks in India, started in 2009. These may have a private sector 'anchor' that invites other investors, such as a processor or retailer who then invites logistics companies and other service providers to co-invest in the (large) platform area. This agglomeration of services, at close range to the farmers, is meant to solve the missing service constraints facing both the retailer or the processor and the farmers. The public sector can also be an anchor investor, or an infrastructure facilitator, providing the 'park' or 'hub' water and electricity and so on, as well as technical assistance services to the farmers linking to the hub.

Next, a family of development strategies is being developed that has several echoes in other developing countries, that again 'brings modern markets to farmers' by establishing collection centres and multi-pronged collection cum service provision arrangements. The general strategy is to bring a procurement unit (such as a collection centre of a retailer or its dedicated wholesaler) to a rural area, and at the same time provide the small farmers with the missing assets and services (such as credit and technical assistance and sometimes delivery) needed to meet the market requirements. This is a version of the 'resource provision contracts' used by export companies in Latin America in the 1980s (Key & Runsten 1999) or by processing companies in central Europe in the 1990s (Gow & Swinnen 2001). These may be collection centres such as those operated by Reliance retail, sourcing vegetables in peri-urban areas in India, or the Cargill Ceylon chain in Sri Lanka, providing technical assistance to farmers not getting that assistance from traditional extension. These may also be quadrangular arrangements such as Carrefour, aided by the dedicated wholesaler Bimandiri, and input and credit provided by Syngenta, with specialised extension from the government, working with a melon farmers association in Indonesia for sales in Indonesia and to Carrefour stores in the region (Natawidjaja et al. 2007).

In a variant of the above, governments themselves set up physical infrastructure (such as warehouse or collection centre networks) in rural areas to facilitate linkages between supermarket chains and individual farmers or cooperatives. This approach can also involve a 'symbiosis' between NGOs and governments to partner with these private sector-led efforts to assist in provision of resources and services needed by small farmers, but with the promise of the latter gaining access to specific and demanding modern markets. This approach is mutually beneficial. NGOs are often seeking to help their beneficiary farmers move from low-remuneration non-quality-differentiated and demand-constrained local produce markets to modern markets linked to urban and export demand (as illustrated in Minten et al. 2009, for the Dutch NGO Himalayan Action Research Centre in India, working with the Mother Dairy/Safal chain). The retailers, in turn, often cannot or do not want to make the investments in technical

assistance and credit provision that the NGOs have as part of their mandates. For example, a large chain in India is starting (2010) to use the assistance of a microcredit NGO for both credit provision and even procurement logistics. Similarly, the United States Agency for International Development-funded Growth-Oriented Microenterprise Development program helped the ITC and Foodland chains and farmers cooperatives with technical assistance and other intermediation in India. Such partnerships may become increasingly common.

Finally, the well-known strategy of forming farmer market cooperatives and farmer companies is being given a fillip — and tested — by the challenge of helping small farmers access supermarket channels in Asia. Development of cooperative action to position small farmers to enter supermarket channels is increasing, as in Vietnam (Mergenthaler et al. 2009) and India (Reardon & Gulati 2008). As elsewhere, this has involved a shift from the traditional cooperative model to the ‘new generation cooperative’ model, with limited membership, target market specificity, and investment and profit sharing in the form of what is essentially ownership of stock.

The emerging evidence is that such aggregation seems to be a requirement to reduce transaction costs to sell to modern channels. Still, a relatively unexplored topic is how scalable and sustainable these cooperatives are (Chen et al. 2004) and what assistance is needed to make them competitive in a rapidly changing market environment. This latter challenge seems present for the multitude of unique strategic approaches now being tested in Asia that are designed to keep smallholder farmers profitably engaged in modern supply chains, while continuing to bring the benefits of modern supermarkets to a rapidly increasing proportion of the region’s consumers.

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## Keynote Address

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## MARKET & SUPERMARKET ISSUES FOR DEVELOPMENT

### Enhancing farmers' capacity to link with markets

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#### Abstract



Research and development efforts to strengthen farmers' linkage with markets often focus on the systematic assessment of market chains, formulation of pro-poor policy recommendations, and the introduction of macro-level enabling mechanisms. Meanwhile there is growing recognition of the critical need for action-learning approaches for enhancing smallholder producers' capacity to better manage farm businesses within dynamic market chains. Traditional agricultural extension generally deals with production-focused, technology-driven learning content. Yet it is now widely acknowledged that farmers also need to acquire knowledge, skills and attitude to improve their participation in and benefit from market chains.

The main objective of this paper is to analyse key learning approaches in enhancing farmers' capacity to link with markets, in particular by comparing:

- 1) crop management- and marketing-based curricular frameworks,
- 2) farmer-group and chainwide participatory processes,
- 3) classroom- and field-oriented learning settings, and
- 4) single-activity and season-long learning designs.

The paper assesses the emerging trends in farmer capacity strengthening towards a more experiential learning process with a market chain perspective — as exemplified by the participatory market chain approach and farmer business school. It highlights experiences and lessons from the root and tuber crops sector, drawn from collaborative work by the International Potato Center and partners in developing countries of Asia, Latin America and Africa. Finally the paper identifies needs and opportunities to further improve capacity strengthening approaches, including their potential adaptation and upscaling across agricultural market chains and contexts.

The International Potato Center (CIP) is one of the 15 centres that make up CGIAR, the Consultative Group on International Agricultural Research. CIP has a long history of research into technological on-farm innovations, because many of the CGIAR centres were created as crop improvement centres, introducing varieties as part of the green revolution. The centre has recently become part of the discussion and debate on markets, which is an exciting development.

The products of CIP's research benefit the poor, including both the producers and the consumers. The centre has a mandate to work on root and tuber crops, which gives it the extra challenge of adding value to crops that are otherwise neglected and under-utilised. This paper gives an overview of the work CIP does in terms of strengthening farmer capacity in South America, Africa and Asia.

At the centre's base in Peru in South America, CIP has started work on value chains. The aim of the studies there, on the DNA of the various potatoes, is to stimulate market demand and conserve genetic diversity. The potato best known in the Asia Pacific region is yellow, but there are actually 4000 varieties of potato, and they come in purple, orange and red. If you go to one of the supermarkets in Lima, Peru, and buy a packet of potato chips you find they are multi-coloured, and that is stimulating market demand for the potato in Peru. In turn, the demand gives an incentive to farmers to conserve native potatoes in the highland Andes.

In Africa, there is a different value chain. CIP is creating demand based on the nutritional value of an otherwise low-status food, the chip potato. The strategy is to improve the nutrition of the centre's target populations, which are women and children younger than 5 years, by promoting consumption of chip potatoes, based on the value of sweet potatoes as a source of Vitamin A.

In Asia, CIP works across East Asia to South Asia. One example is the work in Indonesia on collective brand development for traditional potato snack foods. That includes, for example, making use of the non-marketable potatoes that are not accepted by FritoLay or Indofood. CIP encourages their use in traditional potato snack foods, one of which is called jacket potato chips, and CIP is creating a collective brand, capitalising on local culture of West Java.

In the Philippines, CIP's focus is on the link to the industry for feed, on value-added processing for sweet potatoes as a raw material for the feed industry.

In CIP's work on linking farmers to markets, the research and development have several key themes. One theme focuses on enabling policy, institutions and safety nets. Another theme is in marketing support services, enhancing access. CIP looks mainly at partnerships between market chain actors, improving co-ordination and collaboration between them. Of course, farmers have a vital role in relation to partnerships in market chains. Much of CIP's work is focused on how to link small farmers into agriculture market chains, in terms of decision-making and action.

This paper focuses not on the dynamics of market chains, but rather on an important element of how farmers decide and take action on market opportunities and participation in market chains. From the viewpoints of research and development, CIP is exploring the role of capacity strengthening, so that farmers are able to make decisions and take actions that allow them to not only participate but also benefit from these chains.

In relation to work on capacity strengthening for farmers to link with markets, there are three key points to highlight:

- farmers as learners;
- learning approaches; and
- the learning context.

These three are important for design of interventions for capacity strengthening.

Enhancing farmers' capacity to link with markets — Campilan

The International Potato Center works in South America, Africa and Asia to enhance appreciation of the value of tuber crops, and farmers' knowledge



The International Potato Center uses several approaches in strengthening farmers' capacity not only to produce crops but also to understand the market, the stakeholders involved, and the business aspects of their own farms



### **Farmers as learners**

When talking about linking farmers with markets, the CIP teams have found it important to ask: “Which farmers are we talking about?”. In working with farmers, that question has been particularly relevant in parts of Asia. Which farmers is CIP trying to link? The farmers who are already doing business with markets, or the farmers who are 10–20 hours of travel away from the nearest urban centre?

There is a need to deconstruct the farmer ‘stereotype’. In many parts of Asia, there are farmers who produce food for the household, which is called subsistence, as well as for the market. There is an increasing tension, which can be illustrated with Cassava. Cassava serves as a food crop, but now it is becoming an industrial crop for producing starch and bio-ethanol. How does the farmer decide between his food security needs and opportunities for the market?

Should CIP be working with the farmers who are smallholders, or the large-scale farmers? (It should be noted that a small farmer in Australia is a big farmer in Asia.) It is not always clear what is meant by ‘small’, by ‘scale’. In some contexts, being small is about scale of production; in other contexts it is about land-holdings; in other contexts it is about the number of children that the farmer has, who can work as labour for the farm. It is important to determine whether the aim is to link smallholders or large-scale farmers.

There are also farmers who are becoming vertically integrated, so to speak. In talking about farmers, does the word mean the cultivator, or the cultivator who at the same time is the local trader and service provider? At many of CIP’s training courses for farmers as learners, across Asia, during break times these farmers are doing negotiations and loans with other participants. So it is quite important to know which actual farmers are being invited. They may be cultivators, or they may be landless — basically, hired labourers.

Another group is the full-time farmers and the farmers with non-farm livelihood roles. Surveys done in Asia have found that many of the so called farming households actually derive almost half of their income now from non-farm and non-rural livelihoods: the latter can include remittances from relatives working in cities and abroad. Are these still farming households or should they be termed ‘rural households’, when a significant part of household income comes from other than their own farming?

### **Farmer-learning approaches**

A second aspect of capacity strengthening is ‘farmer learning approaches’. Agricultural extension has a long history of training farmers in ways to increase production. Review of training curricula and extension approaches shows that 90–95% of the learning content is about how to grow and how to increase yield. Normally, marketing is only an afterthought.

More recently, learning approaches have looked at market chains, bringing in different actors across chain-wide platforms to enhance farmer participation. For

example, farmers and traders and retailers and wholesalers come together and discuss combinations and opportunities for collaboration.

CIP has found, however, that often farmers are not ready to come onto these platforms. In Latin America where there is a long history of social action, it is very easy for farmers to speak up; they are not afraid to sit beside other more powerful actors, such as wholesalers. In Asia, on the other hand, in many of the countries, that is usually not the case. When small farmers from rural areas have come face to face with supermarket representatives, almost always the farmers have not said anything. It has become evident that there is a need for capacity building beforehand, to prepare these small farmers before they meet other actors in the market chain.

Now a third approach is emerging: that is, farmers learning to grow and sell; farmers preparing themselves for subsequent interactions with the other actors in the market chain.

### **The learning context**

In talking about markets, it is very important to remember that, really, the task of marketing is just one part of a broader repertoire of tasks that farmers do. For example, when staff of the International Potato Center go to a farm they expect to see potatoes. However, you can be sure that the farmer, knowing that the price of cabbage is going up the next season, will shift to the next crop. When helping farmers learn about marketing, it is important to understand the livelihoods portfolio. Farmers go into product diversification and different crops, or they may choose to specialise. Their decisions, as far as linking with markets, are often influenced by this broader portfolio of livelihoods that they engage in.

The social environment is another important factor that CIP considers. Is the training for farmers as individuals, as organisations or as networks? Are they coming to CIP's capacity-building events as individual entrepreneurs or as members of a cooperative or informal network of producers or local entrepreneurs?

Learning-experience is a third important context for learning. Needs-assessments for CIP's training courses have shown that there is very little prior exposure to marketing training, especially in public-sector extension in developing countries. Prior exposure to marketing itself, and to what happens outside the boundaries of the farm, helps farmers learn.

The last aspect of the learning context is the value system. It is often thought that economic gains are central to value-chain development or benefits for market-farmers. Yet, particular social norms are also important, as well as the social values that farmers hold. Farmers consider trade-offs and compromises between economic gain and building social capital, for example. Indeed, there are some social norms that prevent particular participants from taking part in training. Some countries in Asia make it very difficult for women participants to travel alone and to visit and do a market-chain assessment because many cultures frown on women travelling alone. So how can women participate fully in learning events when there are social constraints?

## **Capacity strengthening**

Five key approaches in capacity strengthening have emerged over the years. The three that are applied predominately are participatory market assessment, multi-stakeholder dialogue, and single-event training.

Participatory market assessment often involves farmers learning to do market assessment, appraisal and analytical exercises. The outcome is often an analysis and appraisal, and there is an assumption that the farmers later on will be able to apply what they have learned from the appraisal.

The second type, multi-stakeholder dialogue, builds on market assessment and brings in external experts. They come together in a dialogue with a range of stakeholders at a platform for consultation and negotiation, discussing policy recommendations. Both this and the participatory market assessment approach basically focus on detailed analysis and appraisal, and the assumption is that action follows on, based on what people have learnt on this joint-learning platform.

The third approach is single-event training: classic extension training for farmers. This is often done over three days or one week; it is classroom-based with a structured curriculum, and farmers learn about business skills.

More recently, another approach has emerged, called chain-wide action learning. This also uses a structured curriculum, but the difference is there is an action component to it. As well as doing the market assessment, the farmers are testing innovations, and there is an evaluation of the outcomes of the learning, which involves different actors on the chain.

A fifth approach, which CIP has recently tested in work with the Asia project, is called the farmer business school. It recognises the need for prior training for farmers before they get into contact with, or interact with, the rest of the actors in the chain. It has a farmer-focused curriculum with interactive events with other chain partners, and the action component facilitates testing and innovation within the farmer business school.

## **Content areas**

CIP has also examined different content areas for use in farmer capacity strengthening. Three or more years of pilot trials have shown CIP what farmers seek to learn and what other actors in the market chain would like farmers to learn. Naturally, these include the classic business management skills, business planning and financial management.

An interesting finding is that farmers themselves and the other actors in the chain have suggested and seen the need for a wider range of capabilities that includes, for example, social and ethical conduct. Another need is for 'market chain orientation', to help in characterising market chains and identifying market opportunities; and how to develop loyalty and successive contracts for market agreements. Organisations and services is another area; people want to know what the options are for groups organising themselves into businesses in Asia where the cooperative is almost the one and only solution to organising farmers.

How do they access business support services? Also, capabilities in developing and testing innovations, such as value-adding technologies and institutional and commercial innovations, are seen as useful.

### **Key principles**

In summary, here are some key design principles for farmer learning.

The CIP teams believe that the first step in any capacity-strengthening for farmers is to change their view of the farm, from production system to business enterprise. In Australia and many advanced countries in Asia, this seems like common sense, but that is not the case in many other countries. In centralised economies, in central Asia for example, when CIP started working there 10 years ago, the team found it difficult to start talking about pricing or even quality, because those farmers for many years had been told what to produce and where to sell. They never bothered about markets; these people did not have a concept of price or of market.

The second principle is that the successful farm business requires a capacity not only for technological change but more importantly for nurturing relationships with market chain actors and partners. One example is the wholesaler Bimandiri, which acts as one of these assemblers, playing the linking role between supermarkets and farmers, but beyond that role in the market chain it also supports capacity strengthening. CIP is teaching farmers about standards, sorting and grading and other aspects that lie behind the market chain.

A very important principle is that learning-approaches have to support farmers' everyday decisions between preserving or growing limited assets; between investing for immediate benefits or for longer-term returns; between concrete economic rewards or less tangible social values.

The final principle is that the farmers learn better where they are in a familiar place and social setting. In designing CIP's learning curricula, the centre's teams have found that farmers learn better when they are taught in a farm environment, in sync with the season and production and marketing, and in a familiar group-interactive setting.

Dr Dindo Campilan is a social scientist working for the International Potato Center (CIP) in Asia. Among his areas of professional interest is developing approaches for facilitating pro-poor innovation in agricultural value chains. Dr Campilan leads CIP's interdisciplinary research program on sweet potato and root and tuber crops in Asia, which deals with innovations for improving on-farm productivity, postharvest utilisation and market development. He is leader of an on-going ACIAR-supported project 'Linking vegetable farmers with markets in West and Central Java, Indonesia'. Dr Campilan is a former ACIAR John Dillon fellow (research management) and AusAID visiting specialist (program monitoring and evaluation).

# From farm to fork: logistics, transport, infrastructure

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## Abstract



In Thailand, as in other markets, the supermarket 'revolution' is seen as a 'two-edged sword'. On the one hand, it can lower food prices for consumers and create opportunities for farmers and processors to gain access to quality-differentiated food markets and raise incomes. On the other hand, it can create challenges for small retailers, farmers, and processors who are not equipped to meet the new competition from, and requirements of, supermarkets. Retailing in Thailand has come a long way in only a couple of decades, with new companies entering the market, such as the large European companies Tesco, Carrefour (until recently) and Big C (Casino Group). The number of convenience stores has also grown, with 7-Eleven (6000 stores) run by CP Group (CP ALL) and to a lesser extent Family Mart from Taiwan.

Along with these modern trade retailers, third party logistics (3PL) service providers such as Linfox, DHL, CEVA Logistics and others have also entered Thailand. They have used their international experience to improve standards, speed of service and value of service, helping retailers offer more fresh produce and a wider variety of items at a lower delivered cost.

In the 1980s, Thailand already had transport infrastructure in the form of an arterial road system, and that infrastructure was continually improved during the nineties even in the aftermath of the financial crisis of 1997. This has resulted in the road network being one of the best within ASEAN.

Developing-country governments can put in place a number of policies to help both modern and traditional retailers. For example, in Vietnam, even though the country was accepted into the World Trade Organization with all its market-levelling requirements, international 3PL companies are allowed to operate only as a junior partner in a joint venture with a local company or companies. They cannot operate as a wholly-owned foreign enterprise as yet. Therefore they are not willing to invest heavily in assets until they have control of the company, and this in turn gives the local industry time to develop, ready for the time when the 3PL providers can have a controlling interest and thus be competitive.

Charoen Pokphand Group (Thailand) started as a small seed shop in 1921. It is now Thailand's largest multi-conglomerate, with annual turnover of 30 billion US dollars in 2010. CP Foods (CPF), the food part of the Charoen Pokphand Group, started in 1978, consolidating all the company's agri-businesses. In 2010, CPF had an annual turnover of 6.3 billion US dollars.

CP Foods is Asia's largest agriculture and aquaculture company with full vertical integration. We handle just over 100,000 units of chicken per day;

50,000 of duck per day; and 25,000 units of swine per week. In our aquaculture operations, the quantities are: farmed prawns ('Vannamei', *Litopenaeus vannamei*) 100,000 tonnes per year; fish ('Tabtim', *Tilapia* sp., and 'Basa', *Pangasius bocourti*) 4000 and 100,000 tonnes per year. At present, CP Foods is the largest animal feed company in the world, and the world's largest farmed prawn business.

We have 250,000 staff worldwide, and 80,000 within CP Foods. There are 20 overseas branches, with the Australian office the 20th to open — it was registered early in August 2011. This office exists to source products out of Australia. We are coming here to buy, not to sell. Australians will be interested to know that CP is Australia's largest single customer for wheat.

In Thailand, CP group owns 6000 '7-Eleven' stores. Also, CP owns 80 stores of Lotus in China — there will be 200 stores in the next year and half. CP Group also owns 700 CP Freshmart stores, our own retail outlets in Thailand, expected to number 1000 by the end of 2011.

### **Big is good?**

In researching some background for this talk, I came across an interesting speech that I think expresses the heart of this conference, especially the commercial side of the topic such as is represented by CP Group. It is a speech by Sir Terry Leahy, former CEO of Tesco, given in 2004 (Leahy 2004).

Sir Terry set out a paradox — that supermarkets are seen as both improving and threatening the quality of life in UK — and then he expanded on the reasons for those impressions and responded to them.

On the good side, he pointed out, supermarkets lower prices (enabling even the relatively poor to buy healthy food), raise standards, increase choice, simplify life for people and save them time, create jobs, support and build-up British agriculture and production with suppliers across the British Isles, and attract shoppers to regional towns where there are supermarkets.

The negative comments people make about supermarkets, he said, relate to their competitive power relative to smaller shops, the extra traffic and parking areas around stores, and a perception that supermarkets lead people towards obesity. Sir Terry's arguments in response were that "Winning is good, .... it is what you do with it that matters", and that the big supermarket retailers need to build partnerships with all their stakeholders — customers, suppliers, those in governance and local communities — based on trust, and to aim for balance and to treat others as they would like to be treated themselves.

### **Retailing in modern Thailand**

Before modern retailing came into Thailand, goods used to be exchanged via bargaining, usually in the little shops of middlemen (*cho huay* in Thai). Then some localities became recognised as shopping areas, and in the 1950s modern-style shopping centres began opening in Bangkok. This was the beginning of fixed prices being offered. Gradually, customers became used to this new style of pricing, which gave them more choice and outlets.

CP Group launched 7-Eleven in 1989, and it was so successful that there are 6000 stores today. In 1990 the retailer Makro entered the market. Makro is a bulk, 'big-box', business from the Netherlands. It also teamed up with 7-Eleven.

In 1991 CP opened its Lotus brand, which quickly became a joint venture with Tesco of UK. Then in 1998 Tesco took over Lotus, after the Asian crisis (which we call the 'Tom Yum Kung' crisis: Thailand started it all off). By the year 2000, Bangkok had luxury malls where the focus was on branding. Today the Thai market is part of the global model, and customers expect sophisticated retailing.

Thailand's top retailers are 7-Eleven, Tesco, Tops and Big C (which includes Carrefour). To give you an idea of the popularity of the 7-Eleven stores, one store I know well had a turnover of 30,000 dollars in its first day of opening and now averages 45,000 dollars a day — so it is not a small market.

Tesco has split its 797 Thai stores into hypermarkets (93), supermarkets (90) and Value stores (34) and Express stores (580). Tops, a supermarket chain operating in Thailand since 1996, has 244 stores that include 54 supermarkets, 4 food halls and 150 delicatessens; the 144 stores run by Big C (including Carrefour) include hypermarkets. (Big C, the casino group, took over Carrefour when Carrefour decided to go to the bigger markets in India and China.)

That may sound like a very large number of stores altogether, but there are over 70 million people in Thailand. Further, if you have ever been to Bangkok, or heard about Bangkok, you know that traffic is terrible. It makes sense to have centres within each neighbourhood, so that within about a kilometre radius you can get to a centre where there may be a Tops or a Tesco Express.

### **Supermarket influence on the marketplace**

Supermarkets influence the marketplace in various ways. One example is fixed pricing. Thailand has always had a bargaining market, and even now there is still an element of bargaining in the marketplace; I think a lot of people from Australia love going shopping in Thailand because of that element. However, fixed pricing has been a success, and for food it is more convenient.

Obviously fixed pricing has allowed prices to be reduced: retailers bought in volume, and that drove down costs such as for logistics and cold storage, so prices have become more affordable. As an example, when I started with CP back in 2000, chicken-breast prices then were \$5 per kilo and even before that it was \$10 per kilo. Now, chicken breasts in Thailand are \$2.50 per kilo. There are several reasons for the fall in prices, but bulk buying is one factor, especially domestically.

Product offering is another aspect of the market influenced by supermarkets. If you go into any Tesco in Thailand or even a 7-Eleven, you will see many imported products as well as products that are Thai-manufactured. One example is Snowy Mountain Water, which is produced in Australia: it is selling extremely well in our 7-Elevens, even though the water is 30 baht compared to 10 baht per kilo for Thai water. Thai people understand that value for money is not all about cheap products. We certainly like spending money on food.

International third party logistics companies have followed the big European retailers into Thailand: Linfox and Toll are recent additions. These companies have implemented systems that take advantage of Thailand's good road system (except in the Bangkok traffic), and they have led to a dramatic reduction in logistics-related costs and to quicker turnaround times.

Supermarkets have had an effect on consolidation. Like any other Asian national marketplace, Thailand once had thousands of markets in the country. Farmers only needed to supply the local village. When supermarkets entered the system, farmers and food manufacturers either had to grow rapidly to support so many large retail bases, or they had to consolidate, with companies such as CP.

Thailand has many co-operative farms with CP. Think of a prawn farm: CP supplies the feed and the juveniles, the farmer runs the farm; CP buys back all the mature prawns for our production facilities. These farms give us the volume, and also security because all the inputs are provided by CP, and production is fully vertically integrated. The system means that local farms continue to be sustainable and part of the larger picture. It is much harder for individual farms to work with the retailers like that.

Food standards in Thailand have risen because of supermarkets. Since 1999, global food standards have been increasingly adopted in Thailand. Thai companies such as CP and many others take pride in certification, traceability and being green. Retailers, especially companies such as Tesco and METRO, have helped in implementing the food standards. The food standards have also helped us improve our efficiency. Many people think that when you implement food standards it is going to slow up production. In fact, food standards help efficiency.

### **Supermarket evolution drives change**

CP has evolved with the supermarket revolution. We started off with a feed mill, as I said earlier, and that feed mill is still going to this day. Then CP moved into value-added protein, and now we are producing meals: we sell 500 tonnes a month of ready-to-eat meals.

Over the past 20 years, access to larger markets and better distribution channels have driven down overhead costs through an increase in sales and production runs. Distribution has improved and logistics have become an increasingly important part of our portfolio, to the extent that we now own our own logistics firm, because we understand the importance of logistics costs. It means we can supply products fresh to market.

We have implemented world food standards such as the British Retail Consortium standard, and UK retailer audits, and many other ISO standards. Aside from improving the safety of our processes and products, this has led to improved efficiencies. World food standards also have given us access to other retailers and markets around the world, such as your retailers here in Australia.

In these ways, CP Foods has changed from being production-based to applying market-based strategies. For us within our industries, whether poultry or prawns, we now focus around 40% on exporting.

Also, the revolution has meant CP has learnt about product development, and that product innovation and diversity are keys to sustainability.

The supermarket revolution has shown CP that one country is not a big enough market. Suppliers in the global village are running a high risk if they focus their efforts on one country only. The approach adopted by CP now is continental rather than global.

For the past 2 years I have been sourcing products from Australia. I have learnt that Australia has more to offer if you focus on what a market like Thailand needs rather than what Australia has available. Examples are avocado and half-shell mussels: CPF has moved from buying 500 tonnes for importing into Thailand per year to 2000 tonnes last year, just in the last 2 years.

Further, it is not enough to be an 'OEM' (original equipment manufacturer), which produces under somebody else's brand: retailers quickly move to their own brand in the search for higher margins. We have realised that being an OEM is important but we need to build our own brand as well, so that people get to know about CP Foods and the CP brand.

For example, in the proteins that we farm ourselves we have become fully vertically integrated so as to take full advantage of food safety regulations and standards. That also means we do not have to rely too much on third parties. We take control up and downstream of our products, starting with feed supplied by CP, through farm breeders and hatcheries, to our own processing. From farming 1000 chickens per day 30 years ago, we now farm 1.1 million chickens a day. One farmer looks after 50,000 birds.

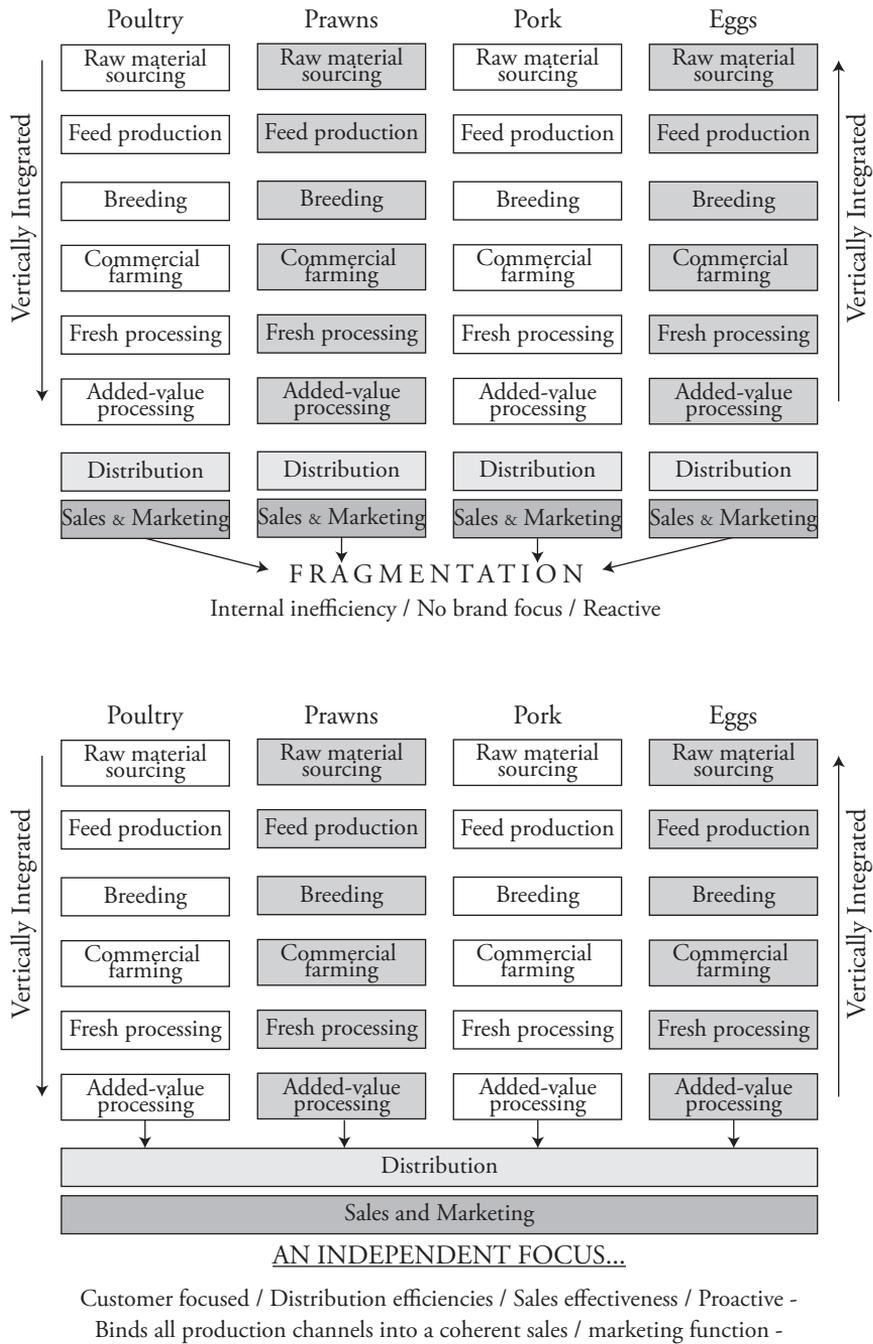
CPF has also moved 'downstream'. Apart from owning our own retail stores we also own our own chicken kiosks or stalls, called '5 Star Chicken', to bring our product to markets. You may see them around Thailand and other parts of Asia.

For CP Foods, the vision is to be the 'Kitchen of the world', and not only based on the proteins the company already owns. The reason for CP now being here in Australia is that CPF wants to work with Australian proteins, milk powders, grains — these are outside of our current portfolio. We are bringing our expertise to bear on potential exports and, we hope, starting mutually beneficial joint ventures together.

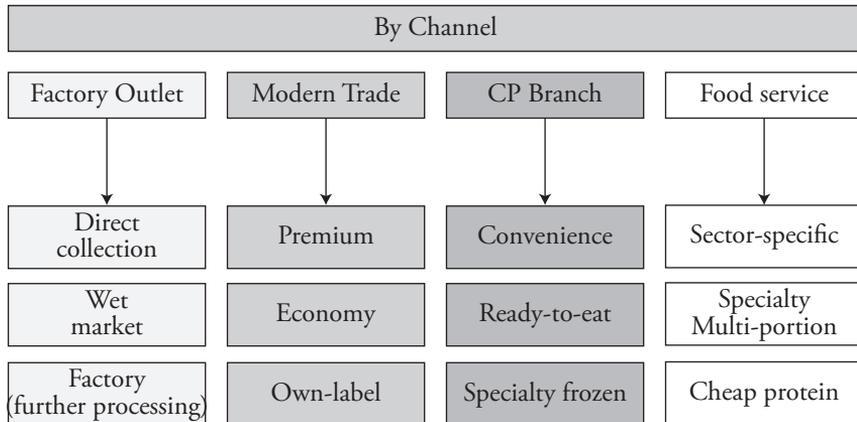
Figure 1a (top diagram overleaf) shows a previous structure in Thailand which many businesses, not only CP, used to use. It shows CP's main raw materials — chicken, prawns, pork and eggs — but they are in four separate lots of integration. For each material CP used to have different distribution channels, different sales and marketing teams; it was fragmented, it was inefficient; there was no 'brand focus' — in fact every factory had a brand. The brand was more like a tag than anything else.

Over the last 20 years, or really in the last 10 years, CP has adopted a new structure. In the lower diagram overleaf (Figure 1b) you see that all the raw material comes under one distribution centre, and one sales and marketing team. This structure has a more independent focus: it is customer focused and binds all production channels so they function coherently.

**Figure 1.** (a) (top) Domestic market previous structure;  
(b) (below) Domestic market new structure



**Figure 2.** Branding of products by channel improves profit and customer loyalty



Focus brands by channel = Profit and customer loyalty

Figure 2 shows how CP Foods has moved away from being only an OEM manufacturer. In Thailand, many OEM manufacturers have a factory outlet, whether it is for food or for clothes, and you can buy right outside the factory. That is still an important part of our business, but we also engage in Modern trade retailing, with premium and economy products as well as our own label. The CP Branch column in the figure refers to CPF's branches, such as in Australia; and there is also CP's Food service, which is sector specific, specialising in multi-portion production and some cheap proteins.

### Conclusion

CP Group has been in food production and retailing for 90 years, and has evolved and expanded hugely in that time in parallel with other developments in food marketing in Thailand. We now manage every aspect of the food journey, from farms to millions of forks, guaranteeing that CP food is a good-quality product, not just in Thailand but in other parts of Asia as well. We want to increase the share of Australian-produced proteins we include in this process.

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# Women farmers and market access: the PNG context

Rufina Peter

PNG Women in Agriculture Development Foundation

## Abstract



Women in Papua New Guinea (PNG) have a vital role to play in managing the long-term sustainable supply of food to the formal and informal markets. With over 85% of the food grown by women, and with relatively little public investment in the food crop sector over time, national non-government organisations such as PNG Women in Agriculture Development Foundation (PNGWiADF) have been formed. They aim to help smallholder farmers address supply constraints and physical and market infrastructure issues, and to provide opportunities and assistance such as agricultural and business training, and brokerage services. They lobby and

advocate for improved utilities as well as providing quality assurance. This paper outlines the key characteristics of the agricultural sector in PNG, discusses the markets for fresh produce, and analyses the value chain using case studies from PNGWiADF. It also outlines strategies and recommendations made by the PNGWiADF to contribute to the development of a viable food crop sector in Papua New Guinea.

In Papua New Guinea (PNG) it is largely (85%) the women who produce food, and so they're quite important — which is why the title of my talk is 'Women Farmers and Market Access'. I think that situation is not unique to PNG; I think it is quite common in developing countries.

The paper briefly outlines the features of the PNG food sector, then the role of women and the non-government organisation (NGO) 'Women in Agriculture Development Foundation'. It looks at two case studies, and the way forward.

A key feature of the food sector in PNG at present is the poor market-access opportunities, which largely stem from lack of public investment into physical and market infrastructure. It is also an unregulated market.

The assistance that has been given to the sector, to date, has largely been production orientated. The statutory research organisation, called the Fresh Produce Development Authority, is specifically mandated to work for the food sector, and their primary focus has been on agronomics and biological research. It also includes extension — mainly the village extension model of farmer-trainer, or farmers training other farmers. Not much has been done to look beyond production to the other segments of the value chain.

Smallholder farmers make up the majority of the producers and, as already mentioned, 85% of them are women. A large part of their production goes into informal or 'wet' markets, though some of it goes into formal markets.

Formal markets supply the mines and other major resources projects, to feed workers in those areas, as well as hotels, supermarkets and major institutions such as the educational and correctional services institutions. Supermarkets are quite an insignificant market for farmers at the moment, in terms of domestically produced food.

There is competition for land use now in PNG, and population pressures. The competition for land use may stem partly from the global phenomenon of land grabbing that is happening in many parts of developing countries, but population pressures are also being experienced. In talking about food security, it is important to consider how women can be empowered to address that issue.

However, the formal markets are increasingly playing a bigger role, and we need to equip our farmers to meet that demand with respect to volume, consistency and quality of production and, obviously, commercial practices, so farmers can meet formal market requirements when starting from a subsistence base.

### **Women in Agriculture Development Foundation**

I want to give you some background on how the Women in Agriculture Development Foundation (PNGWiADF) was set up, and how long it took to get to where it is at the moment. Basically it started in 2000 with a group of scientists who got together at a workshop called ‘Women’s Voices in the Food Chain: Shouts and Whispers’. The aim, in that initial consultation in 2000, was to identify issues along the whole food chain. Women at the meeting identified issues and made recommendations, but after that, nothing happened for about 7 years because the initial workshop was government-driven and there was not really any way to push forward. Then in 2007, with assistance from Australian Women in Agriculture and especially because of Kathy McGowan (a delegate at this Crawford conference), the PNG women decided to set up an NGO to have the freedom to be able to move things along, which perhaps could not be done in a government setting.

After initial meetings in 2007, the organisation (PNG Women in Agriculture Development Foundation) was launched in 2008, and the strategic plan, work plan and everything else were completed by October 2010.

**Table I.** PNG Women in Agriculture Development Foundation

<b>Date</b>	<b>Progress in developing the PNGWiADF</b>
2000	‘Women’s Voices in the Food Chain: Shouts and Whispers’
2007	Meetings towards establishing PNGWiADF and policy document
2008	Launch of the PNGWiADF
2010 March	Review and endorsement of the PNGWiADF. Round table talk with key stakeholders and partners
2010 May	PNGWiADF 5-year work plan
2010 October	Finalised 5-year work plan, revised structure of PNGWiADF



**Figure 1.** Existing coordination locations, across Papua New Guinea, of the PNG Women in Agriculture Development Foundation, whose key activities are horticulture, floriculture, livestock, aquaculture, eipculture, eco-tourism, fisheries and agro-forestry

The map in Figure 1 shows the network in 2011; it has spread throughout the country since the time of launch. The women who are members of the PNG Women in Agriculture include farmers, who may have little or no formal education, and also very well educated women who have college and university degrees. All the women agriculture extension officers in the national and the provincial departments of agriculture are members.

Where these officers have no recurrent money to operate their recurrent functions, Women in Agriculture supports them: they work on the programs that Women in Agriculture can fund, to provide an extension service to both the women farmers and the male farmers — the group is not biased; it does not help just women farmers!

## Two case studies

The first case study is a taro commercialisation project by East New Britain Women and Youth in Agriculture Cooperative Societies. These groups have set up a taro supply chain, and they have targeted the retail markets in Port Moresby, which are really the supermarkets. They have a seed nursery which provides the groups with good quality planting materials. Figures 2 and 3 show a sample of the taro crop that they sent to the market, and it being bagged.

The group has sent three trial shipments to Port Moresby. They have learnt lessons during that trial, in terms of harvest techniques, in terms of pricing, and so on. They are now scheduled to make a bigger shipment of 14 tonnes into Port Moresby and that will happen early next year. According to their calculations they will be making about K18,900 per container. In total, they are sending 18 tonnes to Port Moresby, so it is profitable exercise.



**Figure 2.** Some of the taro crop that the East New Britain Women and Youth in Agriculture send to Port Moresby



**Figure 3.** Bagging the taro crop for sale in Port Moresby

The way these groups organise themselves in their respective localities depends on, really, the cultural setting and other factors that exist in each locality. The East New Britain Women and Youth decided that they should form a cooperative. They have 15 cooperatives now, with about 375 members.

Obviously, these groups did not work alone. They needed to form strategic alliances and gain the collaboration of players along the value chain — from production researchers all the way through to distributors and the markets. They have collaborated with researchers in the agriculture research institutes such as the PNG Cocoa & Coconut Institute and the National Agricultural Research Institute, the University of Natural Resources and Environment, and the National Department of Agriculture. They have collaborated with provincial administrators, and even, at the ward level, the ward councillors. They have also collaborated with the Pacific Adventist University which really is their distributor, and the retail market outlets. So this project is about collaborating with people along the value chain with a win-win outcome for all.

The second case study is a floriculture project in Lae that includes women and youths of this region where these groups are vulnerable. They have organised themselves and they now supply flower seedlings and vegetative cuttings to surrounding areas within Lae and also into adjacent provinces.

Among the clients of this group are business houses that want to hire pot-plants, and to have cut-flowers for special occasions, and the group also supplies the demand from hotels. They provide 'training of trainers' (ToT) training to other groups who would like to go into floriculture, and that too has proved to be a profitable business.

These two case studies are intended to demonstrate that assistance — a little bit of assistance in targeted areas — can go a long way towards making a difference for people.

Using the lessons learned from these two case studies, I suggest the way forward is for partners, including the Government of PNG, to increase their public investment into public goods such as roads and other infrastructure, and extension services. Also we need public–private partnerships into the other areas along the value chain.

We definitely need to see some support going into the Women in Agriculture, the national organisation. The country is so diverse that the setting up of the national Women in Agriculture Development Foundation has been quite instrumental in bring women together. It has led them to organise themselves to be able to access capacity-building for skills that they are lacking, and in other areas as well. The Foundation has also been empowering women to be able to negotiate and collaborate with other players along the value chain.

As a final comment, as an illustration of the importance of women in development, here is what Kofi Annan, as Secretary of the United Nations, said in 2005:

*‘Study after study has told us that there is no tool for development more effective than the empowerment of women. No other policy is as sure to improve nutrition and promote health, including the prevention of HIV AIDS, and no other policy is as powerful in increasing the chances of education for the next generation.’*

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# Competition between traditional food traders and supermarkets in Indonesia\*

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## Abstract



In Indonesia's urban centres, supermarkets have multiplied recently. With cheaper higher-quality commodities and better services, supermarkets have the potential to drive traders in traditional markets out of business. This paper evaluates whether that is happening. It finds that traditional traders experienced declines in their business. However, both qualitative and quantitative findings indicate that the main cause of decline is not supermarkets. Instead, traditional markets are plagued with internal problems and face increasingly bitter competition from street vendors. The paper recommends policy to strengthen traditional traders and tackle the problem of street vendors.

Competition between modern and traditional retailers has been taking place in developed countries for many years. In the United States, for example, many studies find that Walmart adversely affects existing retailers (Artz & Stone 2006) and the local labour market (Basker 2005), while consumers generally benefit through the lower prices, arrival of new brands, and differentiated products that result from the competition (Hausman & Leibtag 2007).

Towards the last decade of the previous millennium, the battleground expanded to developing countries, where deregulation in the retail sector, aimed at increasing foreign direct investment, resulted in the proliferation of supermarket chains (Reardon & Hopkins 2006; Minten 2008). Reardon et al. (2003) found that, as of 2003, supermarkets' share of the retail food sector in several emerging economies, such as Thailand, Mexico, and Poland, had reached 50%. In Brazil and Argentina, where the proliferation began earlier, the share was around 60%. Traill (2006) has used various assumptions and predicted that supermarkets' share of the retail food market will reach 61% in Argentina, Mexico and Poland; 67% in Hungary; and 76% in Brazil by 2015.

The onset of supermarkets in developing countries, bringing with it higher quality products at lower prices, would theoretically be beneficial to consumers, especially those who are poor. At the same time, however, the increased competition may force traditional retailers, many of whom are also vulnerable to poverty, out of business. According to Reardon & Hopkins (2006) and Minten (2008), the war between supermarkets and traditional retailers in developing

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\* This paper is a shortened version of the article 'Traditional food traders in developing countries and competition from supermarkets: evidence from Indonesia', published in *Food Policy* 35(1): 79–86, February 2010, by Daniel Suryadarma, Adri Poesoro, Akhmadi, Sri Budiayati, Meuthia Rosfadhila and Asep Suryahadi.

countries takes place on several fronts, such as price, convenience, quality of the products, and safety.

Other than descriptions of the number of traditional retailers that have closed down since the onset of supermarkets, or comparisons of their growth rates, there is yet to be any study that conducts an impact evaluation of the effect of supermarkets on traditional retailers in developing countries. Furthermore, studies that use micro-level data of traditional retailers are still very rare, even in developed countries. In a case study in Portugal, Farhangmehr et al. (2001) measure traditional retailers' perception of supermarkets and unsurprisingly find a negative perception.

In this paper, we measure whether supermarkets adversely affect the traditional retailers. We use the data from a survey of traditional retailers that was precisely designed for this purpose. This article focuses on traditional retailers inside traditional markets, as opposed to local shops, for two reasons. Firstly, the majority of traditional retailers are located in these markets. Secondly, the commodities sold by these retailers are fresh fruit and vegetables, meat, and basic necessities. These commodities also make up a large part of the supermarkets' product line (Krishnamurti & Fauzia 2004). Hence, these traders are the supermarkets' main competitors.

### Food retail trade in Indonesia

Supermarkets have been around since the 1970s in Indonesia, although they were only concentrated in large urban centres. Foreign supermarkets began entering the market in the late 1990s as foreign direct investment in the retail sector was opened in 1998. Table 1 shows the top five modern retailers in

**Table 1.** Five largest supermarket operators in Indonesia

<b>Top five retailers</b>	<b>2004–05 (no. of stores; sales)</b>	<b>2010 (no. of stores; sales)</b>
Carrefour (1998), currently 60% foreign	22 hypermarkets; A\$551 million	67 hypermarkets, 16 supermarkets (including acquisition of Alfa in 2008); A\$1.4 billion
Hero (1970s), currently 94% foreign	16 hypermarkets, 99 supermarkets; A\$428 million	38 hypermarkets, 120 supermarkets; A\$867 million
Matahari (1995), currently 0% foreign	17 hypermarkets, 37 supermarkets; A\$281 million	38 hypermarkets, 29 supermarkets; A\$338 million
Alfa (1989), acquired by Carrefour in 2008	33 total hypermarkets & supermarkets; A\$371 million	–
Superindo (1997), currently 51% foreign	41 supermarkets; A\$111 million	73 supermarkets; A\$152 million

Indonesia, their establishment date, current ownership structure, and growth rates over the past 5 years.

In contrast to the relatively recent establishment of supermarkets, traditional markets have been supplying food over the past several decades. A traditional market usually consists of between 150 and 680 stalls or counters owned or leased by small traders. City governments own most traditional markets and manage them under the Office of Market Management. This office manages the markets either entirely on its own or in cooperation with private companies. The latter involves giving the private companies a permit to build and/or operate a traditional market under a build, operate, and transfer scheme, with the private companies making a set payment to the office each year. There is no information on the number of traditional markets in Indonesia. Despite a declining market share, latest estimates show that traditional markets still command about 50% of the total food market in the country (Natawidjaja et al. 2006).

### **Survey design and research methodology**

The majority of supermarkets in Indonesia are located in urban areas. Moreover, the mushrooming of supermarkets happened around 2003, 5 years after the food retail sector was opened to foreign direct investment. Given those conditions, our goal is to compare the performance of traditional traders before and after the explosion of supermarkets. This section describes the design of the survey and the research methodology.

We conducted the survey in urban areas with the highest supermarket density: that is, Greater Jakarta and Bandung. Greater Jakarta comprises Jakarta, Bogor, Tangerang, Depok and Bekasi.

The traditional markets that form the treatment group were chosen deliberately, based on the following conditions: there is a supermarket within a 5-kilometre radius of the traditional market; the supermarket must have been opened between 2003 and 2006, or if there are several supermarkets, they all must have opened within that period; the traditional markets should be located in the same district as the traditional markets in the control group; and the traditional market must not have been renovated after 2003. However, the final condition turned out to be quite irrelevant since the majority of traditional markets in Greater Jakarta and Bandung have not been renovated since 2003.

For the control group, we chose traditional markets according to the following conditions: the traditional market should be located in the same district as those in the treatment group; there is no supermarket within a 5-kilometre radius of the traditional market; there was going to be a supermarket opening near the traditional market in 2007; and the traditional market must not have been renovated after 2003. Traditional markets that had a supermarket opened near them in 2007 were specifically chosen because a traditional market serving areas that do not interest supermarkets may not be comparable to traditional markets in the treatment group.

There were 98 traditional markets in Greater Jakarta and 20 traditional markets in Bandung. There were approximately 188 supermarkets in Greater Jakarta and

80 in Bandung. Only supermarkets built between 2003 and 2006 were kept in the sampling frame. The locations of the traditional markets were then overlaid with the locations of the supermarkets.

Using our sampling frame, we found two traditional markets in Depok, and three in Bandung. Traders in these markets formed our treatment group. Two additional traditional markets, one each in Depok and Bandung served as the control group. Given our sampling frame, these markets were representative of the traditional markets in these urban centres in Indonesia.

The traders interviewed were limited to those who had been trading for more than 3 years. Moreover, only those whose merchandise was fresh fruit and vegetables, meat, or other basic foodstuffs were enumerated, as they made up the majority of traditional retailers. The respondents were then randomly chosen on a probability-proportionate-to-size sampling method basis. The survey began in October 2006 and was completed in November 2006. In total, we gathered data on 249 traders from the treatment markets and 151 traders from the control markets.

The questionnaire that we used in the survey asked traditional traders about their business practices and condition in 2003 and 2006. We chose 2003 because information that required a longer recall period would be increasingly noisy. Moreover, in order to ensure relative objectivity, the questions were arranged such that the traditional traders had no prior knowledge of the purpose of the study. Informing the respondents of the real purpose of the study would bias their answers negatively, as was proven by the study in Portugal (Farhangmehr et al. 2001).

In addition to the questionnaires, we also conducted in-depth interviews with several traditional traders, traditional market managers, supermarket officials, the Traditional Traders' Association (APPSI), the Modern Retailers' Association (APRINDO), and officials from relevant local government agencies. In total, we conducted 37 in-depth interviews.

To check whether our treatment and control markets had comparable baseline characteristics, Table 2 shows the traders' characteristics in 2003. Mean testing shows that traders in the two market types were not significantly different in most characteristics, with the exception that there were significantly more rice traders in the treatment markets.

### **The effect of supermarkets on traditional food traders**

Given that we have a panel dataset, we use fixed effects estimation. Since we have a two-period panel dataset, the estimated effect using this method would be the same by a difference-in-difference estimation technique. In addition, fixed effects estimation removes bias caused by time invariant unobserved heterogeneity. The basic equation that we estimate is:

$$P_{it} = \beta_1 S_{it} + \beta_2 X_{it} + \alpha_i + v_{it} \quad (1)$$

where  $P_{it}$  is the performance of trader  $i$  at time  $t$ , where  $t = 1, 2$ . We use two measures of performance: log of average daily revenue and log of average daily

**Table 2.** Mean characteristics of traders in the treatment and control markets in 2003

Trader characteristics	Treatment	Control	Difference	Dummy
<i>Trader</i>				
Female	0.46	0.54	-0.08	Yes
Experience (years)	11.90	12.62	-0.72	
Finished at least 9 years of education	0.62	0.64	-0.02	Yes
<i>Trading space</i>				
Total size (sq. metres)	8.28	8.71	-0.43	
Number	1.22	1.26	-0.04	
<i>Commodity</i>				
Single commodity	0.49	0.43	0.06	Yes
Main commodity is rice	0.09	0.04	0.05*	Yes
Main commodity is fresh fruits and vegetables	0.34	0.28	0.06	Yes

**Notes:** \*\* 1% significance, \* 5% significance; the mean comparison tests are two-tail t-tests for continuous variables and chi-squared for categorical variables.

profit.  $S_{it}$  is a dummy variable that is equal to 1 if the traders are selling in a traditional market with a supermarket nearby and 0 otherwise. At  $t = 1$ , the value of this variable is 0 for all traders, while it is 1 at  $t = 2$  for all traders in the treatment markets. Therefore, an estimate of  $\beta_1$  is the estimated effect of supermarkets on traditional markets.

Meanwhile,  $X_{it}$  is a vector of control variables, which includes number of trading spaces used by the trader, main commodity sold by the trader, and whether the trader only sells one commodity. On the other hand,  $\alpha_i$  represents time-invariant characteristics of the trader, both the observed and unobserved. The role of these characteristics on business outcomes is not estimated since we are using fixed effects. This means we are not able to ascertain the correlation between trading performance and factors such as age, experience, education level, and sex of the trader. However, this not our main objective and, more importantly, we do not have the issue of time invariant omitted variables bias.

The first two columns of Table 3 show the estimated effect of supermarkets on traditional markets in terms of profit, while the last two columns measure the effect in terms of revenue. Contrary to the literature in the United States, there is no statistically significant effect of supermarkets on traditional markets in Indonesia. In addition, our results are also opposite to the studies mentioned in Reardon & Berdegúe (2002).

However, we find that our results corroborate the study in Brazil (Zinkhan et al. 1999). Looking at in-depth interview results, it appears that the Indonesian

**Table 3.** The impact of supermarkets on traditional markets

	Average daily profit		Average daily revenue	
	(1)	(2)	(3)	(4)
Supermarket	0.061 (0.064)	0.068 (0.065)	0.078 (0.065)	0.091 (0.064)
Time indicator (2003=1)	0.481** (0.049)	0.493** (0.049)	0.365** (0.051)	0.377** (0.050)
Number of kiosks		-0.041 (0.121)		-0.038 (0.134)
Size of kiosk (sq. metres)		0.033 (0.018)		0.026 (0.018)
Single commodity dummy (Yes=1)		-0.229 (0.217)		-0.487* (0.229)
Main commodity dummies	No	Yes	No	Yes
Overall R-squared	0.06	0.09	0.02	0.09
F-statistics	100.37**	253.83**	51.73**	14.95**
Panel observation	400	400	400	400

Notes: \*\* 1% significance, \* 5% significance; the dependent variables are in log form; robust standard errors in parentheses; estimation is done using panel fixed effects.

condition mimics that in Brazil, where households believe that traditional markets provide fresher products and enjoy the more personal shopping experience than they find in supermarkets. In addition, given that small stores also make up a substantial part of the customers in traditional markets in Indonesia, it is also possible that the small stores prefer to continue long-standing business relationships with the traditional traders as opposed to forging new relationships with supermarkets.

The only other study of supermarkets and traditional markets in Indonesia, CPIS (1994), found that traditional markets and supermarkets attract different segments of consumers. The former attracts mostly low-end consumers, while the latter attracts mainly the middle and upper class consumer. Moreover, CPIS found that the goods sold in the two markets are largely complementary, with traditional markets providing fresh foods and supermarkets selling processed food and non-food goods. Related to this difference, the study states that the competitive advantage of traditional markets comes from the low prices and freshness of the products, while supermarkets provide superior comfort and cleanliness. These findings provide additional explanations of the non-existent effect that we arrive at in our estimation.

There are also more explanations from the in-depth interviews. Firstly, there is intense competition among traditional traders themselves rather than with supermarkets, which plausibly reduces revenue and profits. In our survey,

only 3.3% of traders in the control markets consider supermarkets to be their main competitor. In contrast, 66.2% of traders perceive other traders and street vendors as their main competitors. Surprisingly, even the majority of traders in the treatment markets, 56.5%, do not consider supermarkets their main competitor. Hence, it may be the case that supermarkets do not have a significant adverse effect on traditional retailers.

Secondly, we focus on traditional traders who are selling fresh fruits and vegetables, meat, and basic necessities, as they are the main competitors of supermarkets and the majority of traditional traders in Indonesia sell these commodities. However, they are also the most resilient ones, as World Bank (2007) finds that supermarket penetration is slowest in these areas. Hence, our results do not say anything about traders who are outside the confines of our study, such as those selling processed food, electronics, or furniture.

Thirdly, our estimation is a short-term one since it measures the effect of supermarkets on nearby traditional markets at most within 3 years of opening. It would be interesting to see the long-term effect of the supermarkets on traditional traders in developing countries.

### **Concluding remarks**

Supermarkets have been around in major urban centres in Indonesia for the last three decades. At the onset of the liberalisation of the retail sector in 1998, however, foreign supermarket operators began entering the country, sparking a fierce competition with local operators. Some commentators claim that traditional markets are the real victims of the intense competition, as they lose their customers due to the cheaper and higher quality products and the more comfortable shopping environment that supermarkets provide. Therefore, there are calls to limit the construction of supermarkets, especially in locations near traditional markets.

This study has investigated the impact of supermarkets on traditional market traders in Indonesia's urban centres. Five traditional markets were chosen as the treatment group and two traditional markets were chosen as the control group. The sampling frame ensured that these markets are representative of traditional markets in urban areas in Indonesia. Furthermore, it also ensured that the treatment and control groups had similar characteristics other than their proximity to supermarkets. Two treatment markets and one control market are located in Depok, an urban centre near Jakarta, while the rest are located in the Greater Bandung area, the capital of West Java Province. Randomly selected traders in these markets were interviewed using a questionnaire. These traders are representative of the traditional markets.

On average, traders in both treatment and control markets experienced a decline in their business over the previous 3 years. The quantitative impact analysis finds no statistically significant impact of supermarkets on the profit and revenue of traditional traders. These results are further confirmed by the qualitative analysis findings that supermarkets are not the main cause of the decline among traditional markets.

The traders, market managers, and traders' representatives all state that the main steps which should be undertaken to ensure their survival are the improvement of traditional market infrastructure, organisation of the street vendors, and the implementation of better market management practices. The traders explicitly state their confidence that supermarkets would not drive them out of business if the above conditions were met.

Therefore, policy recommendations to ensure a thriving traditional market environment revolve around increasing the competitiveness of the traditional market. This involves several steps. First, the local government should improve the infrastructure in the traditional markets. This includes ensuring proper hygiene, sufficient cleanliness, ample lighting, and an overall comfortable environment. This also entails appointing qualified people as market managers and giving them enough authority to make decisions. Furthermore, the market manager should consistently coordinate with traders in order to achieve better market management.

Secondly, local governments should organise the street vendors, either by providing them with kiosks inside the traditional markets or by enforcing the law banning them from opening stalls around a traditional market. It is imperative that these vendors are kept from blocking the market entrance.

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# Accessing export markets: a developing country producers' perspective

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## Abstract



This paper reviews several of the principal driving factors in export-orientated agriculture in developing countries. There is sometimes debate over developing countries that may be food deficient having segments of their agricultural sector focusing on export instead of producing food entirely for domestic markets. Export-orientated high-value agriculture maximises returns (price) to smallholders, which in turn improves their food purchasing power, leading to poverty alleviation. It also facilitates adoption of international best practices through trade interaction between importing and exporting countries, leading to improved efficiencies and competitiveness. Foreign exchange earned from export trade helps stabilise local currencies against hard currencies, and that contributes to macroeconomic stability.

This paper also highlights the realities of the market access challenges that export traders of fresh produce face routinely. These include capacity to meet the multiple stringent standards demanded by developed countries. There is no question that standards are necessary — they are an essential passport to all trade, local or export, but the farmer bears the costs of compliance and certification. That smallholders in developing countries such as Kenya do meet the official control market standards demanded by supermarkets in developed countries is shown by Kenya's horticulture exports of about US\$1-billion-worth of fresh produce annually, 82% of it to the European Union, one of the most demanding markets in the world.

For developing countries' exporters, there can sometimes be 3–5 steps between a producer in developing countries and a consumer in a developed country, leading to low value retention at the developing country level. Pricing and contracting mechanisms by supermarkets for fresh produce limit the capacity of exporters and growers in developing countries, particularly smallholders, to enter into binding contracts. There is insufficient risk sharing along the value chain, leading to smallholders bearing the highest risks in supermarket fresh produce trade. There are development issues in developing countries accessing export markets.

This paper examines the case for capacity-building among smallholder producers to be treated as a 'public good' in the interests of improving best practices and competitiveness, of building export infrastructure such as facilities for testing and certification. Agriculture research is important in developing production efficiencies, controlling pests and diseases, better land-use management and better informing farmers on economics/market trends of key commodities. Ultimately, export trade from developing countries should contribute to Millennium Development Goal 1: Eradicate extreme hunger and poverty.

I speak to you as a representative of farmers from Kenya. I'm talking about small-scale farmers, defined that way not just by their scale of operation but also by economic considerations. I also speak very strongly from a developing country point of view. In brief, the Fresh Produce Exporters Association of Kenya (FPEAK) and the Horticulture Council of Africa (HCA) represent farmer groups. The HCA works with farmer groups that are dealing especially with fresh produce, in 11 countries, extending all the way from Ghana through east Africa to South Africa.

### **Food security: the famine in eastern Africa**

Before I begin, I must touch on the food security situation in the Horn of Africa, where I come from, and which is of concern to Australians and internationally. Although the famine is partly in Somalia which has some challenges with security, frankly there are also many many people hungry in northern Kenya, in southern Ethiopia, in Djibouti, in northern Uganda, and in a few other countries in the region. It is a serious situation and I think we need to see how to make sure that this does not happen again.

We are very excited about the fact that in addition to international aid there has been a strong local response. Very ordinary Kenyans — teachers, policemen and others — have been able to raise quite a lot of money to help deal with this situation, equal to about A\$7 million so far. This is really good, and the first time that we have contributed locally, in addition to international aid.

The question, of course, is why famine is happening again, in the 21st century. We thought that the issues that cause hunger were well understood. Why are we in this situation? The problem is that there was no rain this year, 2011. There was no famine last year because there was rain last year. There has not been rain this year and there is famine — but that is only part of the answer. In reality, there are some three factors that would be important in making sure that food security is addressed in a more permanent way.

The first factor is having a food security system in place. There are many aspects to that, but just as a quick example, a year ago, exactly, from now, there was a bumper harvest in some eastern parts of Kenya that are now in famine. The harvest was so big that we lost 40% of the grain to post-harvest losses, to aflatoxins and moulds. That grain is actually still stored in some government stores at the moment, because, of course, it is poisoned grain that cannot be consumed by human beings. If that grain had been saved, it would have been the first point of call for addressing the current situation.

This shows that in addition to fixing the production system, it is very important to make sure there is proper and safe bulk-handling post-harvest to ensure that we can avoid this situation in future.

Perhaps the most important factor is making sure that the market system works, making sure that farming pays, fixing the market system. Very often, farmers get much less from their farm, from their produce, than what they put in. The inputs of fertiliser, agro-chemicals, and so on end up being more expensive than the returns they get from the farm.



**Figure 1.** An outline of Kenya showing some of the high-quality fruit and vegetables grown by the country's smallholders and other producers

The other factor, obviously, is improving productivity. We all have heard about the decreasing fertility of soils in this region, and I think something needs to be done about that.

However, the big issue is that the aim should be food security and not food self-sufficiency. Farming must be a business, even when it is at small scale.

### **Fresh produce from Kenya**

Many Kenyans earn their livelihood by growing fresh produce. In Figure 1, in the outline of Kenya, you see some of the foodstuffs grown by our farmers. There are 4.5 million people involved in horticulture in Kenya; 1.5 million of them directly as farmers, and another 3 million indirectly. They total about 11% of the population. The value of their production amounts to about US\$3.2 billion, growing at about 9–14% in the last 5 years. It is a significant activity.

The bulk of the production is for the domestic market: 95% in terms of volume and 60% in terms of value. A huge component is also traded, US\$1 billion to be exact, in the last three years, with 82% of that going to the European Union (EU). So standards are extremely important to what we do.

Most (70%) of the fruit and vegetables are grown by smallholders, in a sustainable system, with no subsidies into the sector. However, smallholders and large-scale producers co-exist; they need each other for the whole production system for fresh produce to continue working.

As a way of ensuring smallholders meet standards, we run a quality-standard system called 'Kenya-GAP' (Kenyan good agricultural practice), which is

benchmarked to Global-GAP. By so doing we are able to ensure that farmers meet the standards that are required.

### **Export (super)market realities — the good**

Turning to the topic of supermarkets and accessing external markets, I will start with the good, and then I will go to the bad and the ugly.

The 'good' has already been very well explained today. In Kenya, as elsewhere in Africa, we believe that supermarkets are important for creating convenience, not just for the consumer but also for the producer. If you don't believe me, try selling a 14-foot-long (over 4 metres) container of water melons in the middle of some town like Nairobi, just by hawking it. It might take you several days to do that as a farmer, and much of the produce might actually be spoiled by then because it is too difficult to sell that volume in small amounts to many consumers as a farmer at one site. Therefore, we find it very convenient to trade with supermarkets.

In Europe, we are big traders with supermarket companies such as Carrefour, Tesco and METRO. The advantage for us as small-scale producers is that we are able to pull together our produce and deliver it at once at one point. The advantages are in convenience and in lowering costs.

A second advantage is that by interacting as producers in Africa with the supermarket system, in Europe for example, and in Australia and USA, we are able to develop 'best practices'. By exposing African farmers to the requirements and the standards and the systems in use in developed countries we are able to improve the efficiency of production and, most important, the level of compliance with standards.

Standards compliance is a very important marketing tool. If a country with a small-scale production system is known to meet standards, there will be consumer demand, because the consumers know that farmers are doing things right. For example, from Kenya we trade huge volumes of beans to the UK market, and that means other countries such as Australia or USA or elsewhere will also take our produce, because of our trade with UK.

The third advantage of trading with supermarkets is, of course, the price. The only reason why farmers export their produce is because they get a better price. There is no point in exporting if you are going to get the same price in the local markets; and obviously that has a huge knock-on effect on food security. The income earned by farmers must be about eight times the income they would receive from selling staple foods in their own area. Export prices give farmers more disposable income to use when they have to provide for their own needs.

### **Exports — the 'bad'**

I have just talked about the good things about standards. Standards are important; they are good; they are a passport to trade, especially international

trade. If there is an issue with standards, it is not whether we should have standards but, rather, how the standards are applied.

The first point to note is that there is a range of official control systems or government standards. When you are trading out of countries such as those in Africa, and one consignment is going to the EU, one to USA, one to Australia, one to Japan, you need to meet four different standards. You have a logistical nightmare in setting up your farm systems to comply with all four very different standards.

To complicate the situation further, you have government standards and private standards for the same aspect; for example, pesticide use. At the outset you would be checked by government officials to see that your consignment does not exceed maximum residue levels of the pesticide in question. Then, when you reach the door of the supermarket they not only want to see you have passed the government check, they also want to check you against their own standards, different from those of the government.

Making it a bit more complicated still, there are many different private standards — we deal with 17 of them. Try putting some of these stickers on your box of produce — and paying for the stickers.

That is the last point, the cost issue. Meeting the standards can sometimes cost more than production.

On top of that, there is the issue of unpredictable demand. Yes, things do change in the market, as Australia knows very well, just as we do. All of us were challenged by the volcanic ash, and also by the heavy snowfalls last December. These can be very bad when you are export-dependent.

### **The ugly**

Issues I call 'ugly', not merely 'bad', are 'ugly' because something can be done. I think it is important to see how best to move this debate forward in the coming discussions.

The first issue is that in this trade of fresh produce, and certainly with supermarkets, the farmer takes all the market risks. There is no risk sharing between the farmers and the supermarkets.

Say, for example, you have been asked to supply a certain volume of produce. If something should change, the volume required may be revised downwards, even if the crop is already growing on the farm. It is up to you to know how to deal with your farm produce; never mind that it is very perishable, and market deflection is very difficult at short notice. You are told "I want 20 tonnes, not 40, and that is final". You have to see what to do with the rest. Then, say that for whatever reason there is another change. Again, the farmer will be asked to accept that. Situations like this make it very difficult for farmers, especially small-scale farmers. To supply a particular market we may have over 1 million small farmers organised in a methodical way to produce a particular crop. All of them

are sure that their produce is for market X — and then they are told “Sorry, it’s not going to go. Plough it down.”

Now you can do that if you are a large-scale farmer because you have reserves. But a small farmer will grow a crop of grain to guarantee that he receives enough to provide for planting the next crop. If the crop is not sold, that can be the end of his farming career. This reality we have to live with.

I know that there are efforts in Australia, as well as in UK and France in the EU, to create some kind of fair-price mechanism. We have been involved in some of this, because it is important to find a mechanism that works both for the supermarkets and also for the farmers. Of course the supermarkets’ word is final on the pricing mechanism. For the process of setting standards there may be some little consumer influence but supermarkets decide what it should be. The mechanism will need to apply the principles of free economics whereby there is enough demand and enough supply to counterbalance every aspect at present. However, at the moment there is a vacuum there.

It is also true that 30–50% of fresh produce is wasted, either at the supermarkets, or in the home after people buy the fresh produce. The waste in the home is already paid for by the consumer when they go shopping in the supermarket. Quite a lot of goods also get spoiled on the shelves of the supermarket, and being fair to the supermarkets I agree that they have to absorb that — and of course sometimes the pricing mechanism reflects some of those kinds of frustrations.

### **Environment, not protectionism**

New emerging trends introduce another sad aspect. I am sure you are all familiar with ‘carbon footprint’ and ‘food miles’. Please do not misunderstand me: I agree we must preserve and protect the environment. The farms must pay their rightful share, whether they are small-scale, in Africa or wherever they might be, and also if they are large-scale. Everybody should contribute in protecting and conserving the environment, but it is very dangerous to single out some parts of commerce and leave out others.

Take food miles. You can have food miles being seen as quite important when, say, carrots are imported from Australia to UK; there will be a sticker somewhere on them to say that they came from afar. However, there is no sticker on electronic goods that took the same flight to make some electronic components which are then flown from somewhere to the UK. I think this is ugly.

So I think the movement should be renamed ‘fair miles’ and they should be noted both on food and on other goods. In other words, taking care of the carbon footprint is much better than worrying about *food miles*. That would be a much fairer way of assessing this concept than singling out food, as though you can trade this but you cannot trade that.

I am fully aware of ‘buy-local’ convenience, and debates about it, which, I’m sure, are also strong in Australia. We are told that 50% of Australian food is actually exported. I think for countries like Australia it is very important to export food;

but 'buy local' is important too. I just hope that people can understand that 'buy local' is very very protectionist. Why is it protectionist? Because if you stretch it to the logical conclusion — say, buy local food, buy local electronics, buy local pharmaceuticals, buy local everything — you would kill international commerce as it is known today. Let us be real. There will be countries that trade in food, there will be countries that trade in oil, there will be countries that trade in technology, and therefore it is important to balance that debate: very very important.

### **Why not grow food for local consumption?**

Finally, I know you may want to ask this question and I would like to answer it before you ask. The question is: Why not grow food for local consumption? Why export it? Why is it logical for an African country to be trading in food in some big supermarkets in Europe when there is often no food at home?

In answer, the first point is that farmers are rational thinkers. Say you are a farmer and all the land you have is 1 hectare in a place where there is a bit of water. From that, you get your school fees and medical costs and food for your family, so you must seek to maximise the returns on that hectare. It is all you have for income, and you have needs like everybody across the world.

Therefore, you move into high-value agriculture, which by definition most of the time means horticulture. That is why you might find situations where horticulture is increasing in parts of Africa while in some other parts of Africa there are food scarcity issues, because farmers are business people. They may not know how to do it very well but they actually want to be very business orientated.

The second point is that the best bet for food security is wealth creation and not food self-sufficiency. If you want to feed that farmer who has only 1 hectare, you could ask him to produce enough food for their homestead on his hectare, but if you look at the price of what they are growing you will find that they will be trapped into some form of poverty. If you can multiply that by 8 times by growing high-value agriculture, you can make sure that they have not only a better capacity to access food but that they are also able to meet their other basic needs (school fees, medical bills) which are also extremely important.

So it is very important that food security is seen not as food self-sufficiency. I think economists in this room will agree that there is a very big difference between the food in the pocket and the food in the granary. The reason why Africa has hunger problems is not because they do not have food but because they are not able to access food. That is the difference between Africa and Dubai. In Dubai they do not grow food, but they have food in their pockets.

Farmers in Africa do not seek to export. They seek a market, any market. If the market happens to be local and is paying well, there is no reason for the farmer to go through the headache of exporting. Please understand that. Exporting is a price-seeking mechanism.

For some countries, only agricultural exports are successful, enabling them to globalise other parts of their economies, and providing the foreign exchange they need to balance their reserves.

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## INNOVATION AND THE VALUE CHAIN

### Innovative successes through the value chain\*

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#### Abstract



The global food crisis has focused attention on agriculture and spurred increased investment in the sector. The attention of public policy and research investment has been focused on smallholder farmers' productivity. However, it is critical to enable opportunities throughout the value chain to improve smallholder farmers' access to market with the associated income improvements. With post-farm losses in the global supply of food estimated to be 10–40%, research throughout the food chain is as important to global food security as research to improve yields. The global trade in food is relatively small in comparison to domestic production and consumption, so improvement in the effectiveness of domestic food value-chains to deliver adequate quantities of food is important. In addition to food quantity, the importance of quality attributes, in particular food safety and sound nutrition, which contribute to overall food security, become critical elements of public policy and research investment. The Green Revolution in Asia highlights the contribution of research in improving smallholder productivity. However, research is also delivering a range of innovative outcomes throughout the value chain which are improving smallholder farmers' ability to compete in rapidly changing markets, including in the modern retail environment, while delivering on consumer expectation, reducing waste and improving efficiencies. The paper discusses some of these innovative successes throughout the value chain that improve smallholder farmer competitiveness and contribute to global food security.

The global food crisis has had significant impact on global food systems since 2007. It has been influenced by more rapid economic growth rates in the world's most populous countries, and stagnating yields of major food crops in some of the world's most productive cropping systems, with yield plateaus evident for several cereal crops in some major producing countries. As well, a rapid rise in energy prices has caused convergence of energy and agriculture.

Traditionally, economic development had its basis in land, labour and capital as factors of production. However, improved information and the development of technology through innovation have had a significant influence on economic development. This change from primary factors into information and technology has also played a significant role in the rise of value chains. Importantly, it is now the case that investment in people provides a favourable environment for innovation and knowledge diffusion.

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## **Value chains**

Traditionally, agri-food markets operate by selling non-differentiated commodities, using arms-length transactions such as auctions or pooled pricing mechanisms. Global trends in production, manufacturing and retailing have seen a shift as firms recognise the need to understand and target consumer preferences, which can be achieved more efficiently through closer coordination and integration of firms along a supply chain. This essentially has led to what is considered a value-chain approach.

This approach has become important in both research and policy fields, with an increasing number of development organisations, NGOs and governments adopting it to guide their development interventions. At the heart of value-chain analysis lies the idea that people and firms are connected along a chain that is producing and bringing goods and services to end-consumers through a complex set of activities.

Poor information flow in these complex systems, and other obstacles, often prevent farmers from entering into markets, or reduce the benefits they can obtain from entry. Value-chain initiatives are designed to overcome some of these obstacles and often to mobilise the knowledge and resources of key firms, such as retailers, to improve the opportunities and benefits of market entry for producers and providers of inputs and services.

Almost all donor-supported value-chain development projects are based on the assumption that value-chain development will help reduce poverty. The primary beneficiaries are expected to be farmers, particularly poor farmers.

It is assumed that there is underutilised potential for improving the incomes of poor producers or the employment prospects of poor people. Thus by making value chains function more effectively, for example by improving flows of knowledge and establishing linkages, it is expected that interventions will benefit the poor. However, apart from this general assumption about the connection between market engagement and poverty reduction, approaches to poverty reduction differ tremendously between interventions.

In Australia, the Government agreed to explore the possibility of enhancing productivity through analysis of agricultural value chains. The aim was to identify what industry benefits might occur, the role of government, and how a value-chain analysis could be used by government to determine allocation of scarce resources to ensure greatest benefit to industry and the broader community.

The resulting report recognised that value chains provide an opportunity for firms to have greater control over the price received. However, to maintain a premium price, producers must maintain a process of continuous innovation and differentiation based on market signals. The study concluded that there were a number of mechanisms which would influence overall value and that the role of government is primarily around facilitating this process.

## **Global food and innovation**

Global food production has historically grown faster than global population, reflecting increased availability of food per person. Between 1961 and 2008,

**Examples of innovation resulting from value-chain research**



Farmers working in rice paddies in East Timor as part of the Seeds of Life project. Photographer, Eric McGraw.



Women selling maize at a local market in Kenya



Sorting juvenile sea-cucumbers, Nha Trang, Vietnam



Feeding cattle in Lombok, Indonesia, as part of an Agricultural Systems Management project

world population grew by 117% while food production grew by 179%, with the associated real prices declining over a long period.

### **Innovation in rice production**

Ever since ACIAR was founded in the early 1980s, it has supported the research activities of the International Rice Research Institute (IRRI) — not surprisingly, given the significance of rice as a contributor to global food security, particularly in our region. An ACIAR study, which had a primary focus on understanding the impact of varietal yield improvement of IRRI's germplasm in Vietnam, the Philippines and Indonesia, showed gains averaged 11.2% across the three countries between 1985 and 2009. Economic benefits averaged \$1.46 billion per year, while IRRI's average annual budget over the time was just \$40 million.

Of course, there are many other contributions that IRRI has made, and continues to make, apart from the genetic input into the yields of new varieties. These include capacity building such as training, and non-yield impacts of IRRI germplasm such as improved eating quality, increased resistance and tolerance to pests and diseases, and contributions to overcoming other production constraints. However, the primary impact is derived through research innovation at the product level.

### **Changing preferences**

Global food requirements will continue to increase in coming years, as populations rise and as growing incomes promote both an increasing volume and a changing pattern of food consumption.

One example of a different pattern of food consumption is the higher demand for livestock products, stimulated by increasing disposable incomes. In Asia, demand growth for meat and edible oils outstripped population growth by a wide margin over the past 15 years. Demand for meat and dairy products, and therefore feed grains, is expected to continue to expand more rapidly than demand for food grain.

In addition to changing food-product preferences, around the world consumers are paying more attention to the food they eat, the value they get from it, and what it does for them and for the world around them. Food attributes that offer value to the consumer through good health, environmental stewardship, and ethical treatment of people and animals are therefore becoming more mainstream.

### **People and market innovation**

Related to this rise in consumer interest is a parallel rise in corporate interest, in part captured in Corporate Social Responsibility programs which are driving many changes in the way that food systems operate. These programs focus on the healthiness of food, the sustainability of food production, processing and transportation and the ethical treatment of supply-chain participants.

Research has found that these non-functional attributes work because they embody a value to the consumer that goes beyond satisfying hunger and

nutritional requirements, allowing consumers to vote as shoppers at a time when they are feeling increasingly divorced from the food production system.

The feeling of being divorced from a production system is counter to the feeling of vulnerability when food safety concerns drive changes in consumer behaviour. Research focused on food biosecurity becomes a key part of the innovative response due to these consumer concerns.

### **Biosecurity with chickens**

Cost-effective biosecurity for smallholder commercial poultry operations in Indonesia has been a focus of recent ACIAR research. It has used an innovative approach, with incentives to smallholders to improve practice-change in a highly complex environment. An interesting market-driven aspect of this work developed, for marketing the products: namely, the aim of a clean market chain for meat and eggs from certified biosecure farms, to be sold at premium prices in supermarkets.

Initial sales of chicken meat fetched around Rp30,000 per kilogram, while non-biosecure products were selling for about Rp12,900 per kilogram. Not all benefits flow through to the producers, who bear a significant proportion of the costs. However, significant improvements in the productivity of the biosecure farms have brought improved returns to the smallholders regardless of the financial flow of profits.

### **Sustainability in coffee**

The introduction of global sustainability standards and traceability systems to various commodity systems, including coffee, has undoubtedly led to significant restructuring of global value chains and the ways in which smallholder farmers are engaging with international markets.

Over the last 10 years, schemes such as Fairtrade, Rainforest Alliance and Utz Certified have been gradually introduced into global coffee systems and are now a common feature of the coffee industry. An oft-stated assumption behind certification schemes is that they have been put in place to deliver social, economic and environmental benefits to producer communities, thereby attracting the interest of a number of international development agencies and NGOs. However, a growing body of research has more recently begun to question the tangible benefits, for smallholder participants and broader rural environments, from being enrolled in such schemes.

While market intervention in farm practices is expected to increase further, there is currently very little impartial evidence of actual smallholder benefits and understanding of the constraints limiting smallholder engagement in such systems. Proponents of certification schemes, and industry participants in the schemes, are often aware of their limitations, and are actively seeking solutions to ensure that greater benefits flow to farmers and to the environment.

Research needs to generate insights into rural development processes associated with standards and certification, to support improved smallholder engagement in global markets and the development of appropriate policy to support this engagement. It will ascertain specific development benefits arising from value-

chain initiatives at the farm level, thus helping to inform the design of effective private-sector development interventions in the future.

### **People and trust**

The old story of the supply chain, the 'push' aspect, was all about the product. It drove lean thinking with a focus on cost minimisation and efficient logistics. The new story that has emerged shows a 'pull'-based strategy where the product is important and attributes of the product critical. Now with dynamic information flows and the need for trusted relationships, people are becoming more important in the delivery of benefits.

What the research is starting to suggest is that the relationship aspect, the aspect reliant upon people and trust, is highly important, especially among younger producers, although this important aspect may be so new.

As food systems became more complex, in the past, the supply-chain approach focused on transactions and minimisation of cost. Then value chains developed with a focus on delivering consumer requirements and improved engagement with markets. Now, there is an increasing recognition of the importance of people in this complex flow of product and information, which leads to the importance of trust.

Research shows that if policymakers wish to improve a group's emphasis on market penetration, the most important factor to develop would be group trust: there is a significant positive relationship between marketing support and group trust. Trust encourages people to work together for the common good, and this can flow through to group members working together to improve their access to the market.

### **Conclusion**

The current activities globally, following recent food security concerns, are on track, with the recognition of the importance of research and the contribution it makes to innovation in food systems. This innovation derived from research has always had a product focus, which will continue to be an important aspect of global food security.

The growth and use of value-chain approaches is another important aspect in continual improvement, with governments, donors, NGOs and the private sector recognising the role of the process, from producer to consumer. It should remain as part of the response to overcoming food security concerns.

Importantly, as information and technology are integrated into global food systems, people, the relationships between people, and trust, become increasingly important aspects and should not be overlooked in supporting innovative successes in the value chain.

### **Further reading**

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## SUPERMARKETS: GOOD, BAD OR UGLY?

### An international retailer's perspective

John Glover

METRO Group, Singapore

#### Abstract



Retailers and wholesalers today are investing the major share of their development funds into the Asian marketplace to bring modern retail and wholesale concepts to the Asian consumer. With a large growth in urbanisation across Asia, the region represents huge opportunities as well as big challenges to international players. At the same time there is a growing demand in Asia for high quality and safe goods, which presents a great opportunity for modern retail and wholesale formats. Many companies have recognised the need to promote sustainable production and consumption models in order to be successful also in the next 20–50 years.

In the fast-developing markets in Asia international companies thus have the opportunity to leapfrog international best practices and to install sustainable concepts right from the start. They are also challenged by population growth and the demand and supply of food to supply their customers into the future.

Modern retailers and wholesalers are working closely with farmers and co-ops to improve food standards and quality, to employ sustainable farming and processing methods and to create savings in the supply chain, which also leads to improvements in the incomes and living standards of the farmers. By doing so they are making opportunities for farming and processing industries to serve the global procurement needs of their chains, which are developing Trading Offices within the region. With rising incomes and a rapid growth of the middle class we see a greater demand for imported goods for home consumption and also for the food-service industry. This creates great opportunities for countries like Australia to become the source of ultra fresh and processed products.

It is important that the mindsets of Australian farmers, exporters and producers change to recognise that brands need to be built in these markets. Brands like Sunkist, Dole, Cape, Anchor, Zespri are well known in Asia and globally recognised. Global retailers are changing the face of retail and wholesale in Asia and developing markets and will invest in the future. The challenges are not just with them but with the willingness of others to change.

As a person that sits and reads *The Australian* every morning from my Singapore office, I am always looking at the price of milk, now at \$1 a litre, and the potential for bread prices to drop incredibly low. Within our market, the Asian market and the Global market, we're talking a pretty dynamic industry: one that I really enjoy being in because never a day goes by that is boring.

The METRO group is growing. METRO Group itself is operating out of 33 countries across the globe. We turn over approximately €65 billion and one of the great things is that the company is totally committed to sustainability, food safety and the environment. These commitments are part of the practices we have to have on a daily basis, no matter where we are, and no matter what level of development the country is in. In Asia, that makes it difficult because the Asian markets are not developed like those in Europe or Eastern Europe, so it puts a lot of pressure on us to bring about change.

Headlines such as these — ‘Surge in food index’, ‘Wheat prices a major worry’, ‘Europe is fishing the oceans dry’, ‘World faces food shortages, price rises’, ‘Inflation highest in a year’, ‘Human tidal wave heads for Asian cities’ — are widely discussed. The one that is the most sensitive is the last one: ‘Human tidal wave heads for Asian cities’.

It is a fact, the rate of urbanisation is huge. We are seeing many people moving off the land into the cities where incomes are double those of the rural communities. This migration creates feed for the retailer because these people move into cities where the growth, the employment, and the income generate the business that the modern-day retailer and supermarket thrive on.

The counterpoint of that is that, while we are spending over a billion euro a year on development of stores throughout the world, we have to be sure into the future that we have the food to put into those stores. It is a critical factor for us and it is one of the areas that I have spent much time on in Asia; looking at how we can maintain the supply chain; how I can feed Eastern Europe, Western Europe, and also our own Asian markets in the longer term, with safe sustainable food.

### **Modern international retail in Asia**

International modern retail — is it good, bad or ugly?

As a retailer, I have to say it is ‘good’. You wouldn’t expect it any other way. What we are doing is taking the Asian people from traditional shopping and giving them modern markets. Asian people love to shop in modern markets; they love the environment. The prices are great, and when they shop in supermarkets the people find that they start to trust them more than the local markets.

Internationally, we see issues of food safety in areas like China and Vietnam. Across the globe, people distrust food production systems, because of the sprays that are used; there is education in the schools about this, so that younger people are growing up distrustful of bad farming practices and the resulting foods. A recent example relates to children and baby milk in the traditional Asian market compared to modern trade outlets. Modern trade outlets probably sell approximately 40% of goods bought in the Asian market, but in baby milk we sell 80%. That is because people do not trust their own traders in that product. They do not trust where the product is coming from. They believe, correctly, that there are counterfeit products. A number of fraudulent products come out of China, and are available around the Asian markets, and customers have learned to be distrustful. In contrast, they trust the

An international retailer's perspective — Glover



A modern supermarket in Asia (top photo), compared to traditional markets (lower photos).

## Supermarkets: Good, Bad or Ugly?



Modern trade in Asia brings modern growing methods and display practices



Supermarkets introduce and maintain training and food safety standards

supermarket — and it is for us as international retailers to really develop this trust and work on it.

In Asia, METRO currently has stores in India, Pakistan, China, Vietnam, Japan, and recently we announced our move into the Indonesian market where in the next 5 years we'll open approximately 20 stores. That represents around €400–500 million of investment. As we move into these markets we make a great contribution. We invest €10–15 million in each centre that we open. We introduce supply chains, unbroken 'cold' chains, and distribution platforms for fruit and vegetables in remote areas. This is an area I'll touch on a little later because it is one of the things that make the difference. We link producers to the national market and provide them with export opportunities.

We do a lot of training; we work with the farmers and local producers to show them how to employ international quality standards, such as Global-GAP and international food safety. We go into countries like Vietnam, which is a country full of opportunities and people that are willing to grow and want to learn. With donor funding and our own funding we train thousands of farmers to make their farming practices professional, and to use good agricultural practice. These efforts we have put in working with different donor groups have been good for the government.

The Vietnamese Government has developed Viet-GAP (Vietnamese Good Agricultural Practice) which evolved from METRO-GAP. When we go into a country and there are no standards, we set them, but we do not shoot for the sky straight away. We do not go and say everybody has to work to Global-GAP. Instead, we raise standards to a level where we can be sure that the customers are going to get good, safe food. Our next step is to bring about greater traceability and then greater efficiency in the supply chain as we bring the product to the customer.

When we open a store, we create over 500 direct and indirect jobs. For instance, we have recently opened a store in Vietnam in a city of about 300,000 people, and we employ 500 people in that business and within the local industry. The farmers, the growers and the producers in those areas all benefited from the way we went into that business. We establish transparent invoicing and we dry out the black markets and increase the tax flow. The local governments like us; the federal governments love us because we pay tax. In comparison, the wet-markets and the very grey markets there pay zero tax.

METRO supplies produce to small retailers; it is one of our roles that is a little different from that of a supermarket. METRO is a 'cash and carry', and we also supply wholesale. We are a wholesale business, and we also supply the small 'Mum and Pops' traders. It is our job to ensure these people's businesses last into the future, and to help them into a new way of doing business to serve customers.

If we look at the Indonesian market, there has been a great move away from the Indonesian wet-market and wholesale market. In Indonesia, where traffic is horrendous, there are about 6000 mini marts that have evolved because of the actual culture and the demographics. We divide our business into time zones

relating to how far it is to each of our stores. In normal business, we would say time zone 'one' would be 20 minutes away — maybe 3 or 4 kilometres. In Jakarta, time zone 'one' is across the road! Because of this, in numerous different local areas now there are small mini marts, generally with air-conditioning, grocery shelves, and a good range of products, serviced twice a day from central distribution centres. These businesses actually can compete, price-wise, with the hypermarkets. It is an amazing model and it is one that I think will evolve further in different markets.

METRO encourages domestic consumption by upgrading the distribution sector; and we also contribute to the safe supply of food. Our challenge is that we have to have the food to supply the growing population of the next 20–50 years, and we have to ensure it is safe and traceable. We also have to instil sustainable concepts in our farmers. Our goal is not only to supply local markets, but to build our global sourcing opportunities. Therefore, in the next year just in Vietnam alone, we need to see 20,000 tonnes of live catfish farmed to supply our needs for the year. We need to draw on 6000 tonnes of black tiger shrimp, just to supply our global market. In doing so we have to ensure that this product is not full of antibiotics that are carcinogenic. We have to ensure that the processing is not full of phosphates that increase the water consumption in the fish or the shrimp. We have got to ensure that the shrimp and fish that are pond-fed are not being fed animal waste, that they are fed proper food.

The challenges we face are not challenges retailers would normally have to face in most markets. In the Asian markets, however, we have to get involved, get our hands dirty. In the years I have been in Asia I have learnt a great deal about farming. I am no farmer, I am a retailer, but to be successful there you have to start to understand farming. We need our farmers; we need them to supply; we need them to grow; and we need them to reinvest in their business to ensure our future. That is critical. They have to make the money. We have to ensure that they are profitable — and that we are. We have to give a return to our shareholders. Likewise, we have to protect these people so that in the future they can keep supplying us.

We cannot rely on the existing supply chains which really leave the farmer at the bottom end. For every dollar, he probably gets 15 cents. What we do, as modern retailers, is work with the farmers; we have the farmer deliver to us at our centres where the goods are checked. There is no waste because the farm goods come straight into our processing centres. We immediately put them into coolers; everything is in crates; the farmer gets his receipt; he walks around to the front where he collects his money. We have set up a good system that gives them trust in us, and us trust in them. Farmers are encouraged to work with us; we have transparent prices and reliable and regular orders; we contract farmers to grow for us and supply us. It is not just fruit and vegetables, it is the same with our pork industry, and with our beef, and with all locally grown products. We look to better pricing for produce and higher income for small farmers.

The average farmer has a quarter-hectare lot in many cases; others have up to 1 hectare. We have to work with these small farmers to supply us, but part of the training we give them is how to get greater yields off their acreage. We

encourage them to get out early in the morning and do their picking then, not in the middle of the day, so the product is not left on the side of the road, crammed into cane baskets in 40 degrees heat. We have it packed in crates and shipped straight to our platform where it is put on refrigerated trucks. That is a modern day phenomenon in Vietnam and we are also doing it in China, India, and Pakistan, across the Asian market.

In the past, vegetables would be picked in the heat of the day, left packed at the side of the road, then jammed into the open-backed truck when it turned up, and driven for 6 hours from the highlands to the city to the markets. By that time the vegetables would already be 'three-parts cooked', and would have to be eaten within a day. You could see the waste, when the truck was unloaded — the amount of waste lying on the floor of the markets was incredible.

METRO is looking at improving production. We employ an agronomist to work with us, and agronomy companies help us with the right seed to help the farmers. We help finance the farmers with their seeds and sprays. We guarantee the farmers sale of their goods, so we provide support for the farmers to grow a product that can be delivered to our stores in first class condition.

Traceability is another major consideration for us, and we have launched a product called Star Farm. Star Farm is an initiative in China where we work with the local government agencies and farming groups to train government inspectors, and also our own university graduates, in the right farming practices. We then bring farmers into the Star Farm program where they will learn to grow to an acceptable standard using good agricultural practice (GAP) — and they are graded from 1 star to 5 stars. When they reach 5 stars they are at Global-GAP standard. As they reach the different levels, all the products off those farms are given a barcode and the brand 'Star Farm' which, when they reach our centres, clearly communicates to the customers that these products are safe and traceable. For example, we put our lettuce in a bag and give it a small barcode that relates to the farm the product came from; in the store the customer can scan this product and see its record since 'birth', and exactly how it got to the market. We also now do that with grocery products: our rice, coffee, nuts, pork, chicken. We are applying the Star Farm process in outer Mongolia where we are producing lamb and beef. Some of that lamb is as good as you would see anywhere in the world. It is all under the Star Farm guarantee so we know these farmers have produced the goods to the best conditions. You can also use your smart phone app (in Asia everyone has either a Blackberry or an Apple — it is a great trend!) and you can actually scan the barcode with your smart phone and read all about the product you have just bought.

In a new initiative, we are running a program in Vietnam where we have enabled the small shareholders to grow. It is a dollar-for-dollar program where we actually developed a full distribution centre, funded through the Dutch government. It is the first of its type in Vietnam. We created a supply chain that was so opposite to the old way, people did not trust what it was about. This process complies with full HACCP ('hazard analysis and critical control points' for food safety). We source direct off the farm; we have a pricing structure with the farmers so that when the farmer delivers the goods — we bypass the

collectors and the wholesale markets — we have a formula that gives them a least 5% more or 10% more than they would have been paid by a wholesale collector in the system. In other words, we share the gain in the supply chain so that those farmers will expand and will want to continue to supply us.

### **The Australian challenge**

Australia can be the food basket for Asia, for both ultra fresh and processed food. I think everyone expects that, and Australia does a great job with its wheat and other grains. However, with fruits, vegetables, dairy products, I think there is much more that can be done to provide products to Asia.

Australian farmers, exporters and producers in the market do not seem to know enough about the Asian customer. We have approximately 25 million people in Australia, but in Asia there are hundreds of millions of potential consumers. Yet, here in Australia, we have not taken the steps to develop a brand or market in an Asian country where, even if it were Vietnam with 85 million people, there is incredible potential. Australians still seem to work on a 'fair weather' basis: "Good price in Asia today, I'll ship — oops, prices are actually better in the local market, so I'm sorry...", or they send substandard quality to the overseas market. It is pretty disappointing to be an Australian when you walk around and you see some of this Australian product in the Asian markets.

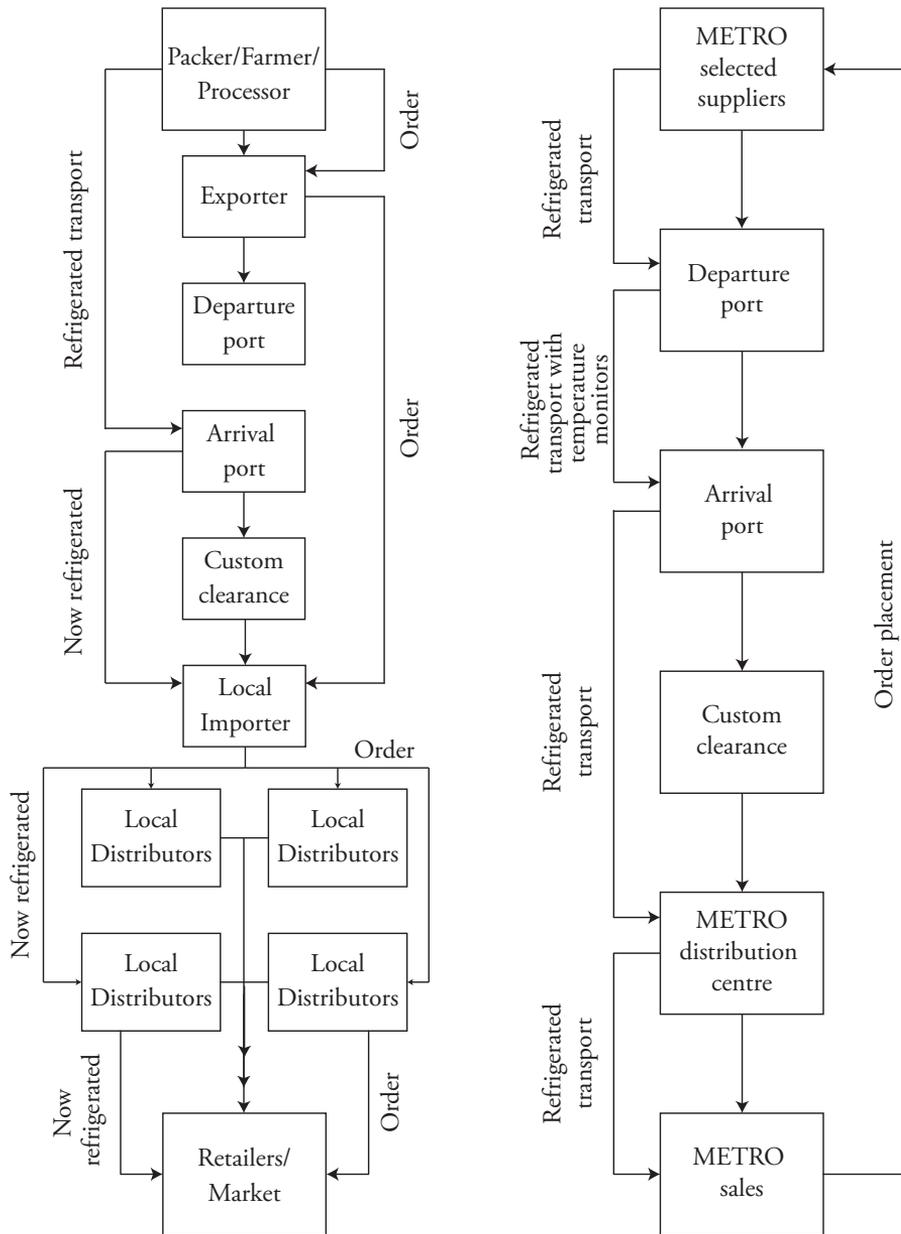
I see Australian product in Asian markets which should never have been exported from this country. It is labelled 'Product of Australia', but packed in boxes that are not export-grade, that are falling apart; fruit that is scarred and misshapen — and it is sitting in a display beside beautiful oranges branded 'Sunkist' or 'Outspan' that look spectacular. It does not say much for our Australian industry when you see our product lying on the floors of supermarkets.

The key is that in Australia we have to understand the Asian consumer. METRO spends millions every year in understanding the market, understanding the customer and their needs, and putting people into the right places to be able to do the business.

I don't see Australian companies in Asia. I see the California Table Grapes Commission, I see the Washington Apple Commission, I see Zespri and others. These people come into our office with marketing plans, to work with us. They align these marketing plans with their media, to match the way they are going to be seen on television, or on street signs, or on buses. I do not see Australian names. The last time I saw Australian names advertised was 28 years ago when I first went to Hong Kong and there were buses and trains with Riverland Oranges advertisements on them. I have not seen anything since then.

When you look at our Australian industries, you see we have a great dairy industry. Is there a name for it? From other countries, everybody knows of Anchor foods; they know of ENZA; they know Sunkist and Zespri; but what names do they know from Australia? There is one great thing that they know — that Australian food products are safe and clean. That is what we are known for.

**Figure 1.** Diagrams showing typical supply chains for food imported into Asia: a traditional supply chain (left), and a modern ultra fresh produce chain (right)



I believe there is a great opportunity to get together and really start to develop a brand. Marketers, rather than farmers (no offence meant), need to market Australia's produce professionally overseas.

Supply chains are also an issue in Australia. Once again it is related to Australian companies dealing in the market — they are not adapting to change. Compare the two supply chains in Figure 1: the traditional, typical of those used by Australian companies, versus a modern supply chain for ultra fresh produce.

There is an old Darwinian theory: 'it is not the biggest, brightest or best that survive, but those who adapt the quickest'. We in Asia are not seeing that from Australia. We see Australian companies — the big dairy companies and citrus groups for example — they go to Asia and they talk to the local importer's agent. They do not talk to the customer, such as METRO. The agent tells the Australian company the same thing he has been saying for the last 15 years. At METRO we try to buy in wider ranges, to have a greater assortment for our customers, but the local importers are not telling that to Australian companies.

We at METRO have talked to the big Australian dairy companies about dealing direct with us. We would like our account to be treated in the same way as the accounts of modern traders like Woolworths or Coles, but we are told the companies have importers and METRO must deal through them. They will not change, so we go elsewhere. It is unfortunate, but at METRO we work with people that want to grow their business.

## Conclusion

In summary, modern trade internationally is definitely not bad or ugly. It is a catalyst for development in the developing countries, bringing in new standards in food safety and improved quality standards. Modern traders improve the incomes of these growing communities, and ensure sustainable programs to support our future growth, and an ability to supply our global business.

John Glover has been in the retail industry for over 38 years. He has spent the past 18 years in the Asian Market, first with the major global retailer Royal Ahold from the Netherlands, and now with METRO Group from Germany. He has been Director of Food for METRO Group Buying, based in Hong Kong, developing international procurement for food globally for the METRO Group. Currently Mr Glover is the Regional Head of Offer Management and Customer Management for METRO Cash and Carry International for Asia. He is a frequent speaker at conferences and at the Produce Marketing Association and the Food Marketing Institute, on Asian retailing, the Fresh Food supply chain and Globalisation in the Retail and Wholesale Markets.

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# Power shifts in the Australian agrifood supply chain

Dr David McKinna

McKINNA et al Strategic Insight Global Outlook

## Abstract



Over the past two years, the oligopsony of Australia's big two supermarkets has been put under the spotlight. Woolworths was the dominant retailer, powering ahead of Coles which was lost in the haze of a dysfunctional management team and a poor business model. With the arrival of Coles' new team from the UK, the sleeping tiger has leapt into battle to recover years of lost time. The Coles recovery strategy and Woolworths defensive response has thrown agrifood supply chains into disarray. Milk at \$1 per litre, the banning of hormone growth promotants and the phasing out of caged egg production are examples of the power of supermarkets to restructure

entire industries and redefine the economics of the Australian food sector. The farmers' share of the food dollar continues to decline. Processor and value-adder margins are now below the levels needed to fund reinvestment to ensure the sustainability of these businesses. At the same time, the regulators have been reluctant to confront the issue because, fundamentally, lower grocery prices are good for consumers. Although there can be little doubt of the power and impact of the two major retailers, there are signs that new contenders are encroaching on their space. ALDI is making its presence felt and Costco has plans for further inroads into the Australian market. Both offer a totally different shopping experience. On a smaller scale, farmers markets, specialty retailers and on-line direct businesses are giving the big boys something to think about.

Although the Australian agrifood industry is far more developed than any of its neighbours in the Asia Pacific region, it is still evolving significantly and quickly. The defining trend has been the shift in market power and therefore income along the supply chain, initially from farmers to processors and more lately from processors to supermarkets. This shift is already resulting in significant structural readjustment and will have long-term economic and social consequences.

## The stages of the power shift

### The family farm era: 1960s and 1970s

The 1960s and 1970s were the halcyon days for Australian farmers. In the post-war era, global demand for food was booming and, with the Australian dollar at a moderate level, exports were competitive. Farm-gate prices generally delivered strong returns, albeit with the occasional seasonal hiccup. The vast majority of agrifood products were sold through grower-owned cooperatives or statutory



marketing authorities — the latter commonly with single desk and pricing powers which favoured grower returns.

### The processors peak: 1980s and 1990s

The late 1970s and early 1980s saw market power moving convincingly towards food processors. Farm cooperatives were forced to become corporatised because of their inability to raise capital under the provisions of the various Cooperatives Acts. Consequently, cooperatives were forced to open up their share registers to outside investors. One by one, the larger ones became takeover targets. Today, virtually all of these are wholly owned by multi-national food companies whose primary aim is to maximise shareholder returns at the expense of farm-gate returns.

At the same time, statutory marketing authorities were phased out because of their political incorrectness; one of the last being the Australian Wheat Board. In conjunction with their new-found bargaining power, the large food companies were able to leverage their power brands to achieve both premium pricing as well as high profits. As a consequence, the processors were investing heavily in Australia for future growth.

### The supermarkets strengthen: 2000s

Over the last ten years, there has been a further shift in power up the supply chain away from food processors to supermarkets. This has reached a crescendo in the last 18 months with the arrival of the new management team at Coles. Coles and Woolworths now control around 70% of the packaged food market. This gives these two retailers tremendous oligopsony power and dominant bargaining power with suppliers.



Coles and Woolworths account for a very large part of most food processors' businesses — up to 70% in some cases. Any loss of distribution in Coles and Woolworths would dramatically decrease the volume output through their factories, impacting on efficiency, economies of scale and overhead recovery.

The latest shift in market power reached a new level with Wesfarmers' purchase of Coles and the appointment of the new management team that was charged with catching-up on Woolworths' leadership position. The Coles turnaround strategy has included store refurbishment, dramatic price discounts and the refocusing of the private label program. But most of all, Coles have leveraged their market power to negotiate deep price reductions. The other supermarkets were forced to do the same to defend their positions further — driving down the profits of food processors.

### The renaissance of private label

Apart from buying market power, supermarkets have another tool at their disposal — private label strategy. Private label (products sold under supermarkets' own house brands) has been around for at least 30 years but has

only recently started to be embraced by Australian shoppers because of a history of inconsistent quality, poor packaging and lack of marketing. Australian retailers have revamped their private label offer to the point where, increasingly, shoppers see them as being as good as the proprietary brands but at a far cheaper price.



Private label now accounts for approximately 25% of all groceries sales and will reach 30% within two years. In the UK, private label accounts for up to 70% of sales in some chain stores. However, private label dramatically erodes the profitability of food processors on three fronts.

1. It takes market share from their own brands, which impacts on factory volume and therefore impacts on costs.
2. It devalues the category. Processors have to reduce prices and offer promotional discounts to defend their market share.
3. When processors produce private label products, the profit margins are usually much less than for their own branded product.

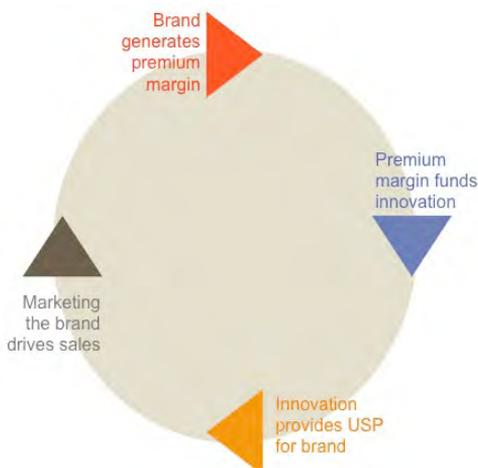
Increasingly, private label product is being imported, largely because of the strong Australian dollar.

### **Supermarkets are flexing their muscle in other ways than price**

Supermarkets have not only used their market power to reduce high prices but also to drive changes in the way food is produced. Coles, for example, has introduced hormone growth promotant (HGP)-free beef and will phase out cage-laid eggs in its private label, which accounts for 70% of egg sales. This will have a significant impact on both production costs and profitability.

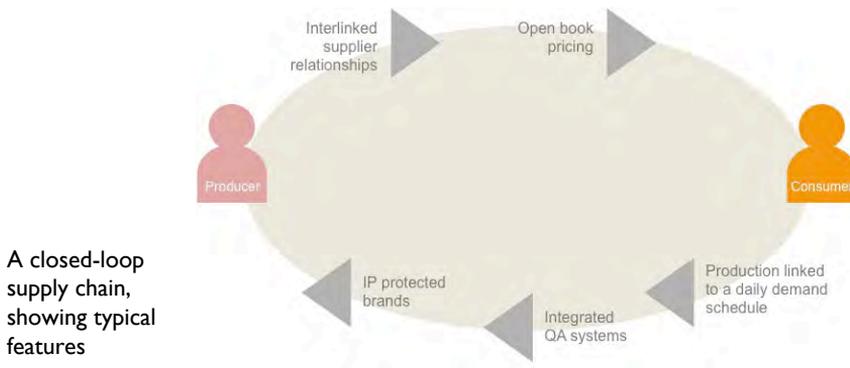
### **The importance of branding to drive category and industry development**

Strong proprietary brands play a major role in industry development and category growth. Consumers, historically, have been prepared to pay a premium for their trusted brand on the basis that it delivers value to them above other competitors. This premium price allows processors to reinvest to create new products.



Investment in innovation and new product development creates products with a point of difference which marketers call 'a unique selling proposition' (USP). This 'unique selling proposition' then becomes the basis of a brand message directed towards consumers that builds the strength of the brand and so the cycle continues. The erosion of the premium pricing

## Supermarkets: Good, Bad or Ugly?



of proprietary brands means that the investment needed to build the category growth is curtailed.

### **Closed-loop supply chains**

An important part of the evolution of supermarkets has been the creation of so-called closed-loop supply chains whereby food moves from paddock to the plate through a series of integrated links.

Closed-loop supply chains are initiated by supermarkets in order to improve product quality and consistency, to lower and stabilise cost and improve scheduling.

A secondary impact of closed-loop supply chains is the emergence of corporate farms. Closed-loop supply chains lend themselves to very large, efficient farms, typically spread geographically to allow seasonal, year-round production and reduce climatic risk. Typically, such farms have outside investors. Because of their size and scale economies, together with their ability to invest in cutting-edge technology and management systems, corporate farms generally have a significantly lower cost of production.

This dramatic structural adjustment in rural Australia cannot be totally blamed on the bargaining power of supermarkets (although they do play a major role). There are other factors at play including:

- the strong Australian dollar,
- the low level of consumer confidence that is dampening demand for higher-priced items,
- Australia's high labour costs and inflexible labour laws relative to our competitors,
- higher freight costs, poor road and rail infrastructure and generally high compliance costs.

### **The threat to the family farm**

These large, highly efficient farms are, in turn, putting pressure on the family farms which generally have a higher cost of production. Smaller family farms cannot compete. As a consequence, in many industries such as potatoes, there

has been a dramatic reduction in the number of potato growers — with three or four growers having the lion's share of the Australian fresh potato market.

### **The social fall-out of the structural adjustment**

The redistribution of wealth along the supply chain is having dramatic impact on the Australian farming sector. In particular, the victims of such redistribution are the country and regional communities where most of the food factories are located. In the past three months, there have been a number of announcements regarding the closing down of major food factories in regional areas and the movement of their operations overseas. The closure of a dairy factory, for example, means that farmers no longer have an outlet for their milk. This comes at a cost to many direct jobs, leading to dramatic economic flow-on effects for local communities. With the loss of a major industry, small regional areas die a slow death because of the inability to sustain social infrastructure such as schools, hospitals, banks, supermarkets, and so on.

### **Who are the winners and losers from all of this?**

Obviously, the structural adjustment creates winners and losers. In the short term, consumers are winning through cheaper prices — it cannot be denied that \$1 for a litre of milk is not a bad deal. However, in the longer term, consumers will probably be worse off because the range of choice will be limited. Potentially, products could be de-engineered to meet the lower price points demanded by supermarkets and a much smaller range of Australian-grown products will be available. Supermarkets do not reap all of the benefits, because they pass on some of the savings to shoppers. As witnessed already, family farms and regional communities will certainly continue to suffer.

### **Lessons to be learned from the Australian experience**

Effective competition policy is central to providing an equitable and competitive retail market environment. The market power enjoyed by Australia's two big supermarkets is as a result of previous rulings by the Australian competition regulator, which allowed the chain of mergers over the past 20 or so years that has led to the oligopoly. Once the genie is out of the bottle, it is hard to put it back in. Emerging countries have the opportunity not to make these mistakes.

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## IMPLICATIONS FOR FOOD POLICY

### The supermarket revolution and its causes

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The Australia & New Zealand School of Government

#### Abstract



This paper focuses on the application of competition law and policy to supermarkets, and more generally on the steps from food production on farms until its arrival on the plate of the consumer. Issues discussed include mergers, abuse of dominance, anticompetitive arrangements, unconscionable conduct, big business, small business relationships, and supermarket codes. The main focus is on Australia but with some reference to international experience.

Australia provides an interesting case study of the grocery retail industry. Over the last few decades, the industry has become highly concentrated as a result of a relaxed regulatory approach to mergers and company-specific factors such as bungled expansion strategies. Public concern and a general sense of unease about this high level of concentration has led to a number of regulatory and policy decisions being taken in recent years.

In the early 1980s there were four major retailers: Coles, Myer, Woolworths and Safeway. At that time, the independent sector accounted for more than 50% of the share of grocery sales. Controversially, a proposal to merge Coles and Myer was approved by the competition regulator in 1985. In the same year Woolworths and Safeway merged, leaving just two major players competing with a third substantial retailer, Franklins. A considerable independent sector, which consisted mainly of small stores supplied by a range of wholesalers, completed the picture.

Two subsequent developments led to a high degree of concentration. Firstly, consumers changed their behaviour over time by choosing the larger supermarkets, which were largely run by Coles and Woolworths, over the smaller outlets. In the 1990s the Australian Competition Tribunal (probably correctly) decided not to oppose a wave of mergers amongst wholesalers. Secondly, a watershed occurred in 2001 when Franklins pulled out of the Australian market. No new entrant appeared to take its market share.

Today, Coles and Woolworths account for approximately 80% of the dry grocery market and the wholesaler Metcash supplies most of the remainder. Together, they account for around 87% of all large supermarkets; that is, those that occupy an area of at least 2000 sq. metres (ACCC 2008 p.xv). There has been entry on a small but growing scale by ALDI, which has about 5% of the

market after opening its first store in Australia in 2001. Another dynamic is the poor management of Coles over a number of years, although this seems to have changed recently with a new chief executive and ambitious plans to recoup market share with aggressive discounting campaigns. Woolworths, on the other hand, has steadily increased its market share and simultaneously increased its margins.

Market dominance aside, modern retail provides many undisputed benefits: an efficient supply chain, impressive choice, buyer power for consumers and supermarkets, the convenience of one-stop shopping, flexible opening hours, and most importantly for consumers, lower prices on a wider range of products.

The risk is, however, that market share accumulates until a tipping point is reached. With firm grasps on the market, the big supermarkets may start easing off on the discounts and reaping increased margins. Or, they can grow their margins by cutting out the middlemen (the wholesalers) and selling generic brands for lower prices than branded goods. There is then the risk that the price of generic brands will increase once the supermarkets have cast aside branded goods and consumers are left with very little choice or ability to buy elsewhere.

With Coles kicking off a fierce discounting war in January this year, it appears that Australia is in the latter stage of market maturity. Coles and Woolworths are growing their dominance and margins by increasingly by-passing wholesalers and processors and buying direct from farmers. We have seen as much with the milk war, which poses a difficult challenge for policy-makers given that producers are inevitably forced to accept lower farm gate prices as a result.

On the other hand, common sense dictates that competition is at work if the supermarkets are jostling with the other mouths on the supply chain. This is healthy and good for consumers.

It is a difficult balancing act that is not unique. While the details vary from one country and market to another, it is clear that in every country there is a level of concern about supermarkets' buying and selling power. The following questions arise: have supermarkets been allowed to grow without sufficient oversight and foresight by regulators and governments? Has the right competition approach been taken? Have laws, regulations and policy responses been effective?

This paper begins with a discussion of the development of modern supermarkets in India and China, which is followed by an examination of the Australian experience to date. Some cases that illustrate the ugly side of highly concentrated, organised retail are then discussed. This paper concludes with some comments on the future, particularly the challenges that will be faced by developing countries if effective competition policy is not adopted now.

## **India**

Modern supermarket retailing was virtually non-existent in India just a decade ago. Since 2002–03, however, modern retail has grown strongly in India. The average yearly growth between 2003–03 and 2009–10 was 49%, five-times faster than GDP (Reardon & Minten 2011). Unlike other developing economies where foreign direct investment has been welcomed and encouraged, foreign

investment has, to a large extent, been blocked. This has meant much of the growth is in domestic companies.

Despite much growth, modern retail's presence across the country remains uneven. While middle class suburbs of the major cities are home to some large supermarkets, politics has restrained growth to some extent because some parties view supermarkets as elements of capitalism to be opposed and there are strong concerns about the impact on farmers and the poor.

There are three unique realities that are shaping and to some extent curtailing the growth of modern retail in India. The first relates to culture. Little shelf space is provided to fruit and vegetables because of the preference by locals to buy fresh groceries from traditional small retailers.

The second relates to government restrictions on foreign investment, which have historically been high, preventing the widespread entry of foreign retail to date. For example, India currently allows up to 51% foreign direct investments in single-brand retail, 100% foreign direct investment in 'cash and carry' wholesale trade, and no foreign investment in multi-brand retail. However, it appears as though the ban on multi-brand retail is about to be removed.

In July 2011, the Committee of Secretaries, an expert panel advising the government, approved a proposal to allow 51% foreign direct investment in multi-brand retail, bringing the policy in line with its single-brand retail policy. The changes require cabinet approval, which could take the next few months given how politically charged this issue is, but the proposal reportedly has the backing of the Reserve Bank of India.

Whilst these changes will undoubtedly see the incursion of foreign retail, if they are passed, there will not be a free-for-all for foreign retailers given that the Committee has recommended the following conditions:

- investment must be at least US\$100 million (effectively limiting the application of this law to large retailers);
- 50% of the investment must be channelled into building back-end infrastructure such as warehouses, cold storage facilities and more efficient supply chains; and
- 30% of supplies to the new retail business must be sourced from the micro, small and medium-size enterprises sector in India.

India's third characteristic is the composition of the retail sector. There are four key players:

1. the traditional informal sector, including wet-market traders, pushcarts and kirana ('Mum and Pop') stores;
2. cooperatives — shops are often located within rent-free or subsidised land;
3. Government-subsidised public distribution system — food procurement is organised by the government-controlled Food Corporation of India and the Public Distribution System, whose remit is to assure access to basic staples such as rice, wheat, sugar and kerosene. These staples are sold through Fair Price Shops and locals pay using a system of household consumer cards; and
4. modern retail.

### **The benefits of modern retail**

For India, some of the well-documented benefits of modern retail may be slow coming because of the government's restrictions on foreign investment to date. The need for investment in the supply chain is great, with approximately 20–40% of perishable produce wasted due to multiple intermediaries, wastage during transportation and storage, high cycle times and an absence of cold storage systems (PWC 2006). However, domestic companies, which have been largely responsible for the rapid growth of modern retail in India, are slower to deliver these benefits.

While prices are lower at these modern retail outlets compared with their traditional retail counterparts, quality seems to be weak by comparison. There is some suggestion that domestic players have been slower to bring the improvements in supply chain that foreign retailers bring. At the wholesale level, where foreign investment is allowed, some of these benefits have been felt. For example, German chain store METRO and its three distribution centres in Bangalore and Hyderabad have launched a supplier relationship management portal to modernise supply chains and it has partnered with the government of Karnataka to improve the infrastructure for fisheries in the state by building and planning auction houses. It has invested over US\$43 million in infrastructure to build humidity- and moisture-control facilities.

### **The concerns and potential costs**

A key justification for foreign investment controls in India is a concern for the welfare of farmers. The fear is that farmers will be excluded from the supply chain as big retailers demand quality and safety standards that farmers do not have the resources to meet. There may also be socio-economic costs as the supply chain consolidates and intermediaries are removed, and further down the track there are the concerns that developed economies are grappling with at the moment, being the way in which farmers are forced to individually contract with supermarkets to secure long-term custom.

To some extent these fears are overblown. There are reasons that the rapid consolidation that has occurred in other countries will not occur as quickly in India, and the lack of distribution infrastructure and the high cost of importing force retailers to rely upon local farmers for their produce. German METRO, for example, claims that it sources 95% of its produce from Indian farmers, which has led to a willingness to invest in training to encourage farmers to clean, sort, grade and pack agricultural produce in line with international standards. However, the concerns posed by supermarkets cutting out the middlemen, being wholesalers and co-operatives, by contracting with farmers direct, will need to be carefully watched. It may be that social policies are more appropriate responses, given that certain benefits to consumers do flow when inefficiencies and middlemen are cut from the supply chains.

## **China**

### **Regulation in the retail sector**

In December 2004, in line with its commitment to the World Trade Organization, China opened its retail sector by removing all restrictions on

foreign direct investment. While foreign investment in the retail sector has surged since then, this was from a low base and it has not transformed the supermarket sector so far. Nor is there an overwhelming presence of foreign companies. In fact, in June 2011, just 5% of all Chinese retail enterprises were foreign owned (Thomas White 2011).

Notwithstanding the rampant growth in modern supermarkets, no chain — foreign or local — has grown into a position of dominance. The biggest supermarket chain, state-owned Shanghai Bailian Group, has only 11% of the market. Walmart, the chain that many thought would dominate China, has 338 stores in 124 Chinese cities, with 90,000 employees and annual sales of about \$7 billion. To put that in context, it is less than 3% of its sales in the United States.

While modern retail is forcing improvements in the supply chain, some of these benefits are taking longer to transpire than expected. With 80% of China's rural population working on small plots, there are few big farms so efficiencies and economies of scale have not yet come to pass. The movement of perishable goods is still a challenge because of the paucity of refrigerated trucks and distribution facilities. Most supermarkets deal with this by sourcing and distributing at a local level. Carrefour, for example, operates its stores as self-contained units that are responsible for their own purchases, which provides some added benefits such as close relationships with local suppliers and an understanding of local tastes.

### **Increased protectionism?**

In the last few years, foreign retailers have expressed increased concern about protectionism. The central government has been open about its plans to assist domestic players, with policies published that seek to ensure that indigenous national champions emerge as the dominant forces in retail (McGregor 2010). There are also special bank loans available for domestic retailers who need funds to enable them to grow quickly.

This is not the extent of protectionism, however. In November 2010, the US–China Business Council published its annual member survey and found that concerns about disguised protectionism were growing, with about 40% of respondents indicating that they had seen protectionism manifest in standards setting, market access barriers, procurement, administrative licensing and government pressure on domestic companies to buy from each other. Uneven enforcement of laws was also noted, with 39% surveyed reporting that they had seen laws applied against foreign companies but not domestic companies.

The Chinese Government has passed discretionary laws and policies, which leave room for different standards to apply to domestic companies. There is also more room for local power plays and politics to dictate the properties and approvals granted to foreign retailers, with the central government recently placing the planning approval process in the hands of provincial governments. In Shanghai, for example, where the state-controlled Bailian Group dominates, all developers of hypermarkets must have their applications heard in public, with the local authorities able to decide whether or not adverse impacts on local communities would result from the opening of a foreign-owned hypermarket. It

seems that there are clear conflicts of interest at local levels, with one retailer recently commenting in *The Economist* that: 'The prime space always goes to local players' (Schumpeter 2011).

### **Policy responses to the supermarket revolution in Australia**

In Australia, given this country's experience of retail dominance in terms of market share and buyer power, several Parliamentary inquiries and regulatory reviews have set out to consider a range of policy responses and approaches. Whilst they are reactive rather than proactive developments, they are worth considering because they highlight the importance of anticipatory policies that prevent situations of market dominance and buyer power from emerging in the first place.

#### **i) Merger law and divestiture**

The merger law was reviewed and tightened in 1993. While the previous test had prohibited mergers that gave rise to dominance or increased dominance, this was replaced by a test that prohibited mergers that substantially lessened competition. Driving this reform was the experience of retail dominance described in the introductory section of this paper, the hope being that mergers would be prevented if the overall effect was a substantial lessening of competition, despite more than one major firm remaining in the market after the merger had taken place.

Since then a number of other options have been considered but not adopted. The most important was a proposal to introduce a 'creeping acquisition' test. This planned to address the problem of retail outlets gradually growing, store by store, to a position of dominance with negative consequences for competition.

A strong push by the National Association of Retail Grocers of Australia to set a ceiling or cap on the market share of the two major retailers was also rejected by a Parliamentary inquiry in 1999. The proposal to set the cap at any number (80% was proposed) created many practical problems. It seemed to prevent major retailers setting up businesses in new areas, even where they brought substantial benefits, and it would have forced them to sell established businesses elsewhere. Many small businesses were concerned that they would lose their opportunity to sell to major potential buyers of their business.

Another option was to adopt a divestiture power, which would enable courts to break up established businesses. This could be done in two ways. First, bestow a general divestiture power on the courts so that whenever the courts believed that concentration was too high, the dominant firm could be broken up. Second, bestow a specific divestiture power on the courts so that when abuse of dominance occurs, the firm at fault could be broken up. Neither of these approaches has been adopted. There are constitutional complications with the first approach because compensation may be payable. With regard to the second approach, the *Competition and Consumer Act 2010 (CCA)* may not provide the legislative power to divest. In any case, divestiture should only be implemented as a policy if it achieves policy objectives.

**(ii) Abuse of dominance — section 46 of the CCA**

Another major policy option is to accept retail concentration but to regulate behaviour, in particular, by focusing on whether or not an abuse of market power has occurred. Over the years the law has been slightly tightened. In 1986 the *Trade Practices Act 1974* (Cth) (TPA) was changed to enable the law to be applied to an abuse of market power rather than simply an abuse of dominance. As with the change in the merger law, the aim was to catch oligopoly misuse of market power, rather than just single-firm abuse of market power.

While the Australian Competition and Consumer Commission (ACCC) has been successful in some prosecutions, it has not succeeded in others. A noteworthy failure by the ACCC in 2003 was against Boral in the High Court of Australia (HCA 2003). However, the ACCC has recently succeeded against Cabcharge, imposing record fines for predatory pricing and abuse of market power. The Federal Court Judge that approved the \$15 million settlement noted that the deterrent effect was significant.

Section 46 of the TPA, now section 46 of the Competition and Consumer Act, is a complex provision that has been amended several times since 2007 to increase penalties and improve the ACCC's chances of success in bringing prosecutions under it. The court now has a list of factors that may be considered when determining whether a company has abused its market power, and the ACCC no longer has to prove that the company expected to be able to recoup its losses in later trading. The Cabcharge result may provide evidence that these amendments are having the desired effect.

Interestingly, the case was settled by the parties before it was heard in the Federal Court. The ACCC was seemingly well prepared, with 52 witnesses and important interlocutory arguments lost by Cabcharge (FCA 2010). Cabcharge ultimately agreed to the recommended penalties of \$14 million plus \$1 million for the ACCC's legal costs. This included a \$3 million penalty for predatory pricing, 'the largest predatory pricing penalty in Australia' (Finkelstein 2010) and \$9 million in fines for refusing to deal with a Western Australian based competitor. The recommendations were adopted by the Court.

**(iii) Price policy**

Another possible response to retail dominance is to impose maximum price controls. In the 1970s price controls were imposed on major retailers; however, even then the operation was extremely complex and seemingly ineffectual. Given how complex the supermarket sector is these days, no one talks of price or margin control in Australia. However, the Labor Government directed the ACCC to hold a public inquiry into grocery prices in 2007–08. This was seen as a response to concern about farmers being squeezed by big supermarkets (directly or indirectly), low food prices, high prices of some groceries such as fruit and vegetables, and the future of small retailers given the large supermarkets' expansion into small express stores and an inability to compete on price.

The ACCC made the following key findings.

1. Grocery retailing is 'workably competitive' but the following factors limit competition on price:
  - high barriers to entry and expansion because of lack of new sites and onerous planning regimes,
  - limited incentives for Coles and Woolworths to compete on price,
  - limited price competition that Coles and Woolworths face from the independent grocery sector, a key factor being the prices set by Metcash.
2. Price competition is strongest on key items such as bread and milk.
3. ALDI has brought about 'competitive responses' from Coles and Woolworths.
4. Increases in prices at supermarkets are not attributable to price gouging, but to local weather events, increased costs of production and international food prices.
5. Nothing is 'fundamentally wrong with the grocery supply chain'. There is no evidence that retail prices have risen while farm-gate prices have fallen.
6. Competition between supermarkets is at least strong enough to ensure that Coles and Woolworths cannot retain all the price cuts obtained on wholesale prices by buyer power (ACCC 2008 p.xiv).

There was some disappointment with the ACCC's treatment of the degree of competition between Woolworths and Coles. While in recent times since the report competition seems to have increased (largely due to Coles' recent price war), there are issues that should be acknowledged and at least debated in the policy arena: such as the lack of incentives for Coles and Woolworths to compete on price; the large supermarkets' behaviour by burying potential competitors in the planning law process when applications to open new stores are lodged; the restrictive covenants in leases in new shopping centres preventing the shopping centre owners from leasing floor space to competitors; the potential for generic brand goods to become so powerful that branded goods could disappear leading to less competition in the future; and the trend of vertical integration, seeing producers at the bottom of the supply chain pressured by the buyer power of supermarkets. While mentioning some of these issues, the ACCC reported that they were not particularly problematic. It glossed over the remainder.

The ACCC also seemed to overemphasise competitive issues in the wholesale market, blaming Metcash for the inability of independent retailers to match prices offered by Woolworths and Coles on key items such as bread and milk. The ACCC concluded that Metcash earns higher margins than it would if it faced direct competition in wholesaling, and implied that Metcash had sufficient economies of scale to be able to offer lower prices, despite the fact that Coles and Woolworths have their own wholesale arms and are presumably much more able to secure lower prices because of their higher market power. Metcash's relationship with independent grocers was also blamed for the fact that it is difficult for new rival wholesalers to establish themselves in the market.

Nevertheless, the review did result in some important changes for consumers.

First of all, a mandatory, nationally-consistent unit pricing regime was implemented in December 2009. It applies to grocery items sold by large supermarkets that sell a minimum range of food-based groceries, and is essentially a labelling system that shows prices per standard unit of measurement such as by volume or by weight. This has enabled consumers to make actual price comparisons in the supermarket, as opposed to guesses about the comparable cost when the sizes of food packages differ. While this was relatively expensive for supermarkets to introduce, it is generally viewed as an effective incentive to compete on price.

The second change involved a monthly comparison of typical grocery baskets across Australia. The idea was to provide some transparency around the cost of groceries in different areas, given that there was evidence that the supermarkets charged dramatically different prices according to location (the presumption being that prices are linked to the affluence of the area in which supermarkets operate). While the website was launched in August 2009, it was disbanded by the Federal Government for many reasons, the largest being the reluctance and in some cases refusal of the supermarkets to cooperate by submitting prices for inclusion.

While creeping acquisition was raised as a potential issue, the ACCC did not find the issue particularly relevant, largely because the supermarkets have not been acquiring many outlets to increase their market share. Only 10% of new store openings between 2006 and 2008 arose from the acquisition or displacement of independent supermarkets, according to the ACCC. The Federal Government did deal with the issue of creeping acquisitions in 2009 and made amendments to the CCA in 2010 substantially addressing these concerns.

**(iv) Australian retail industry code of conduct**

In 1998 Australia enacted provisions in a new Part IVB of the Trade Practices Act which provided for industry codes. These were of various kinds: purely voluntary; involuntary but once agreed legally enforceable by the ACCC and/or possibly by individuals in the industry; and fully mandatory, that is, enacted and enforced by the ACCC and/or possibly private parties.

The Retail Grocery Industry Code of Conduct was entrenched on a voluntary basis following a lengthy period of criticism of big retailers by small business interests. Much of their campaign focused on merger law but the Government was reluctant to change the merger law or the abuse of dominance provisions. Politically, it was easier to settle for a code of conduct with a Retail Industry Ombudsman. The Code certainly eased the pressure to make any drastic revisions to the laws and regulations that already existed.

It should be added that once the Government allocates time to the debate and publishes a code, purely voluntary measures are generally made mandatory.

A code of conduct was introduced in 2003. The emphasis was on supply disputes and mediation; however, some useful matters were settled between individuals and major buyers. This code was partly inspired by a fairly successful

oil industry code, which did sort out a large number of problems between larger oil companies and service stations.

It seems that the present Retail Grocery Industry Code of Conduct (the Code) does some small things in relation to disputes between small sellers and big retailers but it is not very active.

Of note is that the Code is not transparent and there are few revealing reports or reviews of its impact. An independent evaluation of the Code was recently commissioned but the results were not made publicly available.

In broad terms the Code does not seem to have affected the behaviour of big retailers and the pressure they are known to exert over suppliers to extract the best possible deals. It should also be made clear that the Code has had no application to relationships between big manufacturers and retailers. To the extent that the Code has been applied, it has been applied to big retailers and farmers and perhaps a smattering of small suppliers.

The Code may then be a reasonable model for other countries to consider adopting, while recognising its limitations and its effect in diverting attention from some of the key issues of concern. In short, it should be looked to in the sense of lessons learned, and debate should be given to its fine-tuning for application in other countries.

(v) **The law of unconscionable conduct**

To put the legislative framework in context, the original common law doctrine concerning the sanctity of contract gradually changed to provide that in certain cases contracts are invalid if they were preceded by unconscionable conduct or involved unconscionable terms.

In the early 1990s the Trade Practices Act was amended to provide the ACCC with the power of enforcing the common law. The argument was that the victims of unconscionable conduct do not generally have the resources to take action against the powerful entities that engage in unconscionable conduct. It should be noted that businesses do occasionally bring civil claims alleging unconscionable conduct; however, this is more likely to be tied up with some other reason for litigation such as having a contract set aside.

While the law originally applied to relationships between consumers and business alone, at a later date the law was extended to transactions between big and small business.

In terms of competition philosophy, unconscionable conduct does not normally constitute behaviour that lessens competition. On the other hand, it would be correct to say that in most cases the law relates to situations where one party has total bargaining power in relation to another. Indeed, the cases make it clear that the behaviour occurs in a context where the victim has absolutely no choice or no alternative but to accept the conditions imposed by a powerful party. If they had some alternative option then the behaviour would not meet the preconditions for unconscionable conduct. So there is a somewhat sensible

rationale for the law even if it stops short of the fairly high standards that we think of for anticompetitive conduct.

The provisions apply in principle to buyer–seller relationships but in reality have not been used. Their relevance to date has mainly been to shopping centre–tenant relationships.

### **Enforcement through the courts**

In the last 20 years, several important cases concerning supermarkets have been successfully litigated under the Trade Practices Act, now the *Competition and Consumer Act 2010*. Three of these will be discussed in turn. The last case has not yet been decided by the Federal Court, although the matter has been heard in its entirety.

#### **(i) Australian Competition & Consumer Commission v Australian Safeway Stores Pty Limited**

The most important and interesting case in the last decade was *Australian Competition & Consumer Commission v Australian Safeway Stores Pty Limited* [2003] FCA FC 149. This case began with an attempt to engage in price-fixing in 1994 and 1995, by Safeway in Victoria, which is owned by Woolworths. Essentially, a small bread retailer was undercutting Safeway and Safeway responded by attempting to persuade it to engage in a price-fixing agreement. Safeway was ultimately found by the Federal Court of Australia to have made a price-fixing arrangement with one of its plant bakers.

More significantly, the ACCC also succeeded in an abuse of dominance action that was linked to the same case. The essence of this complex case and associated litigation by the Commission against George Weston Foods was that Safeway withdrew bread made by George Weston, a major bakery, from sale at particular stores in response to unusually cheap retail prices for that baker's bread at nearby competitive retail outlets.

Safeway argued that it had refused to accept any bread from George Weston in an attempt to secure the most favourable trading terms from suppliers and avoid appearing uncompetitive in its pricing. It argued that its actions were a normal commercial response to competition — it had a competitor that was undercutting it, they were both supplied from the same source, and it was therefore possible, they implied, that George Weston was offering secret discounts to the small retailer. Of course this was highly unlikely to be true given that Safeway's competitor was a very small store in comparison.

It became apparent during the hearing that the circumstances were driven more by anticompetitive motives. The ACCC alleged that Safeway's actions were designed to induce George Weston Foods to require the independent supermarkets to raise their prices. The smooth commercial explanations offered for Safeway's actions were undermined by evidence that the withdrawal of bread applied not only to stores which supplied the small retailer but to a whole range of stores in nearby areas where competition from one small retailer was not an issue.

One of the debates in Australia that followed this decision was whether Safeway had a substantial degree of power in the relevant market if it was ultimately unable to force independents to raise prices. Another debate has concerned the test for 'taking advantage' of market power and whether or not the business rationale for conduct is relevant to that test.

In summary, the majority of the Full Court held that in relation to four incidents, Safeway misused its market power in contravention of section 46 of the TPA. A hefty fine of \$8.9 million was imposed (\$8 million for misuse of market power and \$900,000 for price-fixing). The penalty sent the message that in calculating a penalty for restrictive trade practices offences, the court considers the specific circumstances of the offence as well as the general deterrence that can be achieved by the penalty.

(ii) **ACCC v Liquorland (Australia) Pty Ltd & Woolworths Limited [2006] FCA 879 — heavy fines for anticompetitive agreements**

In New South Wales (NSW), there are liquor licensing laws applied by the NSW Liquor Administration Board. This case began with allegations that Woolworths and Liquorland, a wholly owned subsidiary of Coles Group, had entered into and given effect to allegedly anticompetitive agreements with liquor licence applicants between 1997 and 2000.

Essentially, prospective liquor licensors would seek liquor licensing from the Board. However, the laws were relatively easy for an existing licensor in a particular area to object to. It was often difficult to fight any such objection and obtain a licence.

Many applicants found themselves facing objections from Coles or Woolworths. Once these applicants realised that they were up against powerful opponents there was concern that the hearings would be lengthy and expensive and there was fear that they would have little hope of winning.

The large retailers began to reach agreements with the applicants, which led to the large retailers withdrawing their objections, provided that the applicant accepted the terms of a restrictive agreement with the retailers, which essentially imposed conditions on the sale of liquor. The ACCC alleged that this practice was so common it was almost routine: standard forms of agreement followed standard forms of objection.

In May 2005, Liquorland admitted that it had entered into illegal agreements with five applicants for liquor licences. Liquorland was subsequently penalised \$4.75 million by the Federal Court of Australia for these contraventions. The case against Woolworths continued before Justice Allsop in the Federal Court in 2006.

In June 2006, Justice Allsop found that the four agreements Woolworths entered into with liquor licence applicants contravened the TPA by containing unlawful exclusionary provisions and had the purpose of substantially lessening competition.

Importantly, there was no dispute that Woolworths made an arrangement by entering a deed in relation to each episode and gave effect to it by withdrawing its objection or threatened objection to the liquor licence application.

Justice Allsop found that in two of the episodes the purpose of the agreement was to prevent, restrict or limit the supply of takeaway packaged liquor to future customers, thereby contravening the TPA's prohibition on exclusionary provisions.

In the other two episodes the ACCC was unsuccessful in establishing exclusionary provisions. However, in all four episodes there was found to be conduct that resulted in the substantial lessening of competition in a market. Ultimately, pecuniary penalties totalling \$7 million were imposed on Woolworths for entering into and giving effect to illegal anticompetitive agreements.

**(iii) ACCC v Metcash Trading Limited [2011] FCA 967**

In June 2010, Australia's largest wholesaler announced its plans to buy 77 Franklin stores from South African retailer Pick n Pay. As 8 franchised Franklins stores also exist, the deal would provide Metcash with the right to supply these stores as well, increasing Metcash's share of the wholesale market from 11% to 17% in NSW.

In November 2010, the ACCC announced that it would oppose the acquisition on the basis that it was likely to substantially lessen competition by removing the only genuine competitor for wholesale supply in NSW. The ACCC added that other parties are interested in buying Franklins and these other parties do not raise the same competition issues.

As Metcash and Pick n Pay decided to proceed with the acquisition notwithstanding the ACCC's objections, the ACCC commenced proceedings in the Federal Court in December 2010 seeking:

- an injunction restraining Metcash from completing the proposed acquisition; and
- a declaration from the Federal Court that the proposed acquisition would contravene section 50 of the TPA (now the CCA).

In a recent judgment by Justice Emmett, handed down on 25 August 2011, the Court ruled against the ACCC on a number of grounds. Firstly, the court held that the appropriate market to consider when examining whether a substantial lessening of competition is likely to occur is not the wholesale supply of packaged groceries to independent supermarkets in NSW and the Australian Capital Territory (ACT) as the ACCC claimed, but the market for the supply of groceries generally by retail. Secondly, the court found no evidence of alternative bidders in the event that the Metcash bid is blocked. To the contrary, Justice Emmett held that this was 'pure speculation' and alternative bidders, acceptable to Pick n Pay, are unlikely to exist.

There are some important aspects of the case for merger law more generally. The decision has clarified the threshold set when considering what may occur if an acquisition does not proceed for the purpose of section 50. For the ACCC to succeed in future, it will need to obtain strong and credible evidence in

support of the counterfactual that it seeks to rely upon so that it can prove that one of its counterfactuals is more probable than not to occur if the acquisition does not proceed. In addition to this, the ACCC must prove that as a result of this counterfactual occurring, there is a real chance that there will be a substantial lessening of competition if the acquisition proceeds.

More practically, this is the first time in more than 5 years that merger parties have ignored the ACCC's informal merger clearance process and forced the ACCC to resort to legal action. Whilst an expensive approach, it demonstrates that forcing the ACCC's hand in the Federal Court may be a viable strategy for merger parties in appropriate circumstances.

The ACCC announced on September 9 that it will appeal the judgment.

### **The 'milk wars' — the supermarkets' cost cuts and the manifestation of competition concerns**

In January 2011, Coles cut the price of its generic brand milk by 33% to \$2 per 2-litre bottle. Woolworths followed on the same day and ALDI and Franklins followed soon after.

From the moment these price cuts were announced, there was widespread concern about the impact these price cuts would have on farmers further down the supply chain. The anxiety stems from the power balances in the supply chain — the suspicion was that supermarkets would maintain their own margins by forcing processors to accept lower prices, which they would in turn pass down the chain to farmers. The result would be lower prices at the farm gate, lost profits, bankruptcy, and in some cases, withdrawal from the industry altogether.

Before considering these potential impacts and whether or not the cause requires a policy response, it is worth stating the benefit that these reduced milk prices are providing to consumers. According to Coles Managing Director (Mr Ian McLeod), the price cut saves consumers \$1 million every week (see e.g. SERC 2011 p.13). For a good that is largely price-inelastic, this is a substantial saving for most Australians.

### **Effects on the supply chain generally**

It is also worth briefly describing the way in which the milk industry has changed over the last decade. First of all, the rise of generic brands of milk has changed the landscape. While processors have historically bought milk from farmers, processed it and branded the finished product ready for distribution to supermarkets, the rise of generic brands has seen supermarkets demanding lower prices for generic brands, which they use to increase demand and push branded goods higher up the shelves. In the UK, the rise of generic brands has gone one step further. Supermarkets have started buying milk direct from processors or farmers, contracting out the manufacturing, then packaging the finished product in home brand bottles. In both Australia and the UK, the price differences between the two have grown exponentially.

In Australia, the price difference was just 18 cents per litre in 2000. A decade later, that difference grew to 71 cents per litre. As the price difference grows,

the supermarkets' generic brands naturally grow at the expense of established brands. This is not just significant because of the market share processors have lost over the last decade. It is significant because farmers have always obtained higher prices from branded milk. The lower prices for generic brands and the dramatic rise in demand have seen farmers' margins retract.

It is in this context that the impact on farmers was considered by the Senate Economics Committee. The Committee investigated the following concerns:

1. reduced milk production as investment in dairy farms dries up and new generations enter different industries because of the uncertainty and reduced profits;
2. farmers cut costs that affect regional communities as they look to protect their margins; cost cuts potentially include wages to local workers and reduced use of local services;
3. lower property prices as the market for dairy farms shrinks;
4. a structural shift to long-life milk (otherwise known as UHT milk), possibly sourced from other regions and overseas;
5. inability of smaller retailers to compete with the supermarkets, given that most small retailers cannot obtain the same wholesale prices as supermarkets; this combines with the reality that consumers buy other groceries when they buy milk;
6. regional communities hurt if farmers withdraw from the industry and/or sell their farms; for every dollar created at the farm gate, an additional \$3 is created in regional communities because of the services that exist to supply and serve the dairy industry (for example, shops in towns, vets, fertilisers, rural services, etc.);
7. reduced market for processors and distributors, with the supermarkets negotiating directly with farmers and manufacturers to process the milk.

The Committee has not yet issued recommendations; it is expected to do so in October (2011). The ACCC has also conducted a review into predatory pricing following allegations that the cost cuts were designed to eliminate or substantially damage competitors. In short, the ACCC concluded that there is no evidence of predatory pricing. To the contrary, the ACCC found that the price cuts were evidence of competition, which has benefited consumers.

### **Policy implications**

As briefly discussed above, farmers sell to processors or supermarkets under fixed-price contracts that are negotiated every 12–18 months. Some of these contracts are coming up for renewal for the first time since January's price cuts and there have been a few departures from current arrangements that indicates to some that farmers are now being squeezed as a result of the price cuts. For example, Woolworths has recently re-negotiated contracts with NSW processors to obtain milk for its home-brand lines. While Lion used to hold this contract in NSW and sourced the milk to fill this contract from a farmers' cooperative (Dairy Farmers Milk Co-operative), Parmalat won the contract in

July and walked away from negotiations with Lion to source milk from the same co-operative. That has led to the concern that Parmalat will try to negotiate with farmers direct and beat them down further on price. Should these suspicions reveal such impacts, thought should be given to social support for farmers that are dislocated as a result of changes in the industry.

## Conclusion

Supermarkets pose policy challenges that the world's biggest emerging markets are only just starting to grapple with. Developed countries such as Australia have been dealing with these challenges for decades, and many lessons can be learned from their experiences.

Australia has, for the most part, managed the retail sector with soft regulatory hands. Market forces have shaped the size and structure of the retail sector over time, creating an environment conducive to all of the benefits of modern retail. Consumers and society more generally have indisputably benefited from the retailers' investment in supply chain management and more efficient business practices, as well as the lower prices and greater product choice that flow from economies of scale.

However, Australia provides evidence that there comes a tipping point when these retailers reach a position of dominance. Anticompetitive behaviour has been aired in Australian court rooms, and various policies have been implemented with limited success.

A possible generalisation from these experiences is that retailing can be thought of as developing through two stages. In the first stage, modern retailing is necessary in order to achieve major efficiencies in distribution. The dilemma is that when this happens it inevitably moves to stage two, a situation where an oligopoly, and quite possibly a duopoly, emerges. In turn this implies substantial seller and buyer power, which may operate against the public interest.

The lesson for developing economies is that effective competition policy needs to be in place well before the second stage is reached, both to deter anticompetitive behaviour and to evaluate the extent to which retail power is being used to unfairly disadvantage smaller retailers and their customers. The sources of retail power need to be understood to ensure that abuses of power are curbed before they occur and weighed against the benefits brought by modern retailers, which must not be unduly hindered.

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# Conference summary

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## Abstract



This summary assembles a number of key points that emerged during the Crawford Fund 2011 Parliamentary Conference 'The Supermarket Revolution in Food'. The summary seeks to identify core issues or questions, including areas for socio-economic and technology research and development, and for policy development. These are shown as highlighted text within each main point. Within several of the points, references refer back to the presentations of particular conference speakers that underpin statements made in the summary.

In opening the Conference, the Hon. John Kerin AM, the Chair of the Crawford Fund, welcomed all delegates and in particular 12 young Australian agricultural scientists who were Crawford Fund Scholars. He said it says something about the Crawford Fund that it is able to attract such prestigious and high quality speakers as President Kuroda, and Professor Thomas Reardon, a leading scholar in the study of supermarket revolution, and others appearing at the conference. At least two Cabinet Ministers and a number of members of the Opposition Front Bench participated in the event.

President Kuroda of the Asian Development Bank set the scene for the conference noting that many Asian countries had successfully transformed their economies through better market access such as is illustrated in Laos by better roads and telecommunications. He said that food supply chains can be a major force in improving food security if markets work inclusively. Senator the Hon. Joe Ludwig, Minister for Agriculture, Fisheries and Forestry, in welcoming participants said the supply of high quality food for Australia and the world is a priority and that he wanted to hear from players in the food chain on the proposed Australian National Food Plan. The conference came, he said, at a time when the knowledge gap between food producers and consumers is wider than ever.

## Overview

1. The supermarket revolution (e.g. Reardon p. 18) has driven, and has been driven by, technology in storage and distribution logistics and in the market chain (e.g. Reardon p. 18); there are benefits to consumers, traders and producers; and overall the revolution has delivered productivity gains in the post-harvest component of food production (e.g. Reardon p. 22). Are these just as important as increases in biological productivity and crop and livestock yields for world food security? If so, it follows that research

throughout the food chain is as important as research to improve yields, to global food security.

**Can research of this nature continue to deliver innovative outcomes throughout the value chain to improve smallholder farmers' ability to compete in rapidly changing markets?**

2. Consumers benefit by the effect supermarkets have in pulling down prices, pushing up quality, and ensuring food safety especially in times of bird flu and other disease outbreaks. Traditional retailers and wet-markets are displaced. Food processing and wholesale sectors must find symbiosis or ways to co-evolve with the new actors. Farmers and small-scale processors, especially those that are asset poor, face tougher market requirements and the need for upgraded investments. Some flourish but not all make it.

**Is there anything that governments can do about this?**

3. In spite of this generally positive view of the impact of the supermarket revolution, there are said by a number of critics to be cases of abuse of dominance, of anticompetitive arrangements, and of unconscionable conduct. Further, and closer to home, the question must at least be asked if the apparent disarray in agrifood supply chains in Australia is down to the oligopsony of Australia's big two supermarkets? Although they are often expressed as such, these views are not necessarily a criticism of supermarkets.

**Are they just an observation about the economic facts of life in a market economy in the absence of appropriate regulation?**

### Impact on consumers

4. Consumers win from the supermarket revolution through lower prices, quality improvements and convenience or life-style changes. In Australia there is milk at \$1 a litre, the banning of hormone-based growth promoters, and the phasing out of caged egg-production. In Indonesia, the rapid growth of supermarkets in urban centres has brought higher quality commodities and better services for consumers even if at the cost of the loss of some traditional diversity from street traders (e.g. Suryadarma p. 50). The advent of the supermarket and the refrigerator in the bigger cities has enabled women in particular to enter the work force by relieving them of the burden of daily shopping for fresh food.

**But is all this too good to be true?** (e.g. McKinna p. 105)

5. Half of all affluent people now die of diet-related disorders, and obesity is pandemic; and it is not a problem limited to developed countries. The extent to which supermarkets are responsible is debatable but the shelf space and promotions devoted by supermarkets to so-called 'killer-foods' must bear some responsibility. Have supermarkets influenced agricultural practice by favouring foods which can be transported conveniently in a food chain — as well as those which have a visual appeal and uniformity in size and shape — rather than those which are healthy or sustainable? Do

supermarkets search for increased margins rather than nutrition or are the two objectives compatible?

***Have research and development compounded this tendency through a skewed allocation of research resources to a few major crops and an ignorance of traditional highly nutritious food varieties?***

### **Opportunities for farmers**

6. The revolution has created opportunities for farmers to gain access to quality-differentiated food markets and to raise incomes, mostly in their own countries. Among producers, it will be the innovative that flourish and grow. Small fresh-fruit and vegetable producers within reach of urban centres in Indonesia, by devoting a greater proportion of their tiny land-holdings to fresh fruit and vegetables instead of rice, have grown larger, buying or renting land from their less innovative neighbours. There are opportunities for countries like Australia to become the source of ultra fresh and processed products in near Asia (e.g. Glover p. 80) given a much better understanding of the Asian consumers and their markets, and provided mindsets of farmers, exporters and producers change, and brands are built in these markets.

In Africa, smallholder producers, even in food deficient countries, by focusing on export-oriented high-value agriculture can earn higher incomes, which in turn improve their food purchasing power leading to poverty alleviation (e.g. Mbithi p. 64; Lovell p. 41 '*one country is not a big enough market*').

***Should policy encourage exports?***

7. Farmers' share of the food dollar continues to decline, an inevitable corollary, some say, of lower food prices. According to this view, the past 15 years have seen a dramatic transfer of market power (and money) away from farmers and towards a handful of large international food corporations. The growth of local markets (such as farmers' markets) and mini-marts may reverse or slow this trend. But farming investments suffer. ***As a consequence do consumers, and the poor of the world, also suffer as we drift towards global famine?***

### **Retailers, processors and value-adders**

8. Margins for processors and value-adders are now below the levels needed to fund reinvestment to ensure the sustainability of these businesses (e.g. McKinna p. 85–86). At the same time, regulators have been reluctant to confront the issue because, fundamentally, lower grocery prices are good for consumers (and voters) although some might argue that in the longer term consumers will pay, as farmers, processors and value-adders go out of business.
9. The advent of third-party logistics suppliers in Thailand has leveraged on international experience and capabilities, to improve standards, speed of service, value of service and help retailers offering more fresh produce, and

wider variance of items at a lower delivered cost. The evolution of one major processor and value-adder included the promotion of ready to eat, value-added food and the development of its own logistics firm.

10. Retailers are also affected by the supermarket revolution. In Indonesia, for example, it has the potential to drive traders in the traditional markets out of business. However, the main cause of their decline might be internal problems and increasingly bitter competition from street vendors (e.g. Suryadarma p. 50). An overhaul of traditional market management systems may enable the traditional traders to compete and survive alongside supermarkets — which Reardon calls ‘symbiosis’ and ‘co-evolution’. In Thailand, the supermarket revolution can create problems for small retailers, farmers and processors who are not equipped to meet the new competition and requirements from supermarkets. On the other hand, the METRO ‘cash and carry’ experiences could be a way to support local retailers, sustain quality and safety standards in produce for consumers, and assist and assure farmers of better returns. Urban traffic congestion and rising transport costs may well encourage a return to more localised retailing.

### **The challenge**

11. If the current ‘industrial’ agribusiness food model is not going to last, should we prepare for a world in which there will be a consumer rejection of what they see as cruel, chemical-treated mass-production of foodstuffs? Nervousness over so-called genetically-modified food, even if it is misplaced, perceptions of cruelty in the slaughter of livestock, and an increasing preference in some segments of society for vegetarian and ‘organic’ produce (now being catered for on supermarket shelf space) may be part of this syndrome. Some see clear signs of a major consumer revolt taking hold in the middle classes of affluent societies. On the other hand, there appears to be a growing demand for meat and processed foods in emerging economies. Is the true extent of the so-called consumer revolt as much to do with media-hype as a genuine market response?  
***Is this only an issue for the rich world, and in any case where does the balance lie?***
12. Our challenge is to find a way that will allow the farmers to reinvest, reduce waste, encourage agro-biodiversity and still have a safe, healthy and efficient food chain for urban consumers. Donors, governments, NGOs and the private sector have important roles to play through infrastructure and knowledge dissemination in helping small farmers and firms weather the double shock of increased competition and demands from the supermarkets on the one hand and a rise in government regulation for food safety on the other.  
***How might policy makers respond?***
13. Many companies have recognised the need to promote sustainable production and consumption models to sustain their own profitability

over the next 20–50 years and are investing accordingly. The market, at least in some societies, may respond to favour health, sustainability and diversity. Developing country governments need policies, such as have been developed in Thailand, to facilitate third-party logistics suppliers to invest with confidence in ways that serve the national interest, improve standards, speed of service and so on. The PNG Women in Agriculture Development Foundation, working on a vastly smaller scale, seeks to help smallholders (mainly women) through agriculture and business training, brokerage and lobbying services.

***Can other government programs help farmers to acquire the skills and attitude to benefit from market chains, ? Or should this also be left to the market?***

14. If the question of intervention is narrowed down from the generic ‘they must do something about it’ to the more specific options for public policy, the answers are less forthcoming, especially if the options are costed in terms of increased spending and therefore taxation (of somebody), or reduced freedom of individual choice.

***Does Australia’s experience with the ACCC offer some hope? Or is it seen as a blunt instrument?***

## Conclusion

- 15. Are there implications in all this for Australia’s aid program, in terms of according priority both to agricultural research and development in general, and to assisting in the efficacy of the operation of national, regional and global food chains in particular?***

ACIAR already has programs in this area, a number of them being undertaken in partnership with AusAID. The recent review of the Australian aid program provides a context in which such support can be explored further. A member of the Review Team, the Hon. Margaret Reid, who appeared on the Q&A panel in the final session of the first day, said that there are no one-size-fits-all remedies to be applied through aid programs — instead they must be responsive to the needs of Australia’s developing country partners — and that Australia has much to offer in agricultural research and development for global food security.

Dr Denis Blight is Executive Director of The Crawford Fund. Denis has had a career that included positions as an Australian diplomat, public servant and chief executive. His association with international agricultural research began in earnest some 25 years ago. Prior to working for the Crawford Fund, he was Director-General of CAB International — an intergovernmental body in research, training and publishing in the life sciences — and had 15 years with IDP Education Australia, the international development program of Australian universities and colleges, including the position as Chief Executive.

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## Q and A\*

Moderators: Dr Julian Cribb (Monday)

Dr Joanne Daly (Tuesday)

Panels: The conference speakers on each day



Thomas Reardon, Rufina Peter and Stephen Mbithi on the panel during Monday's Q and A.

**Q.** *For food security we need access — secure access to land and water. How can security of affordable food access be guaranteed against the competing demands for feed grain, bio-fuels, mining and coal seam gas exploitation by global corporations? Is there a case for changing legislation to grant legal rights to owners or farmers, to the strata below the surface of their property, to protect land and water?*

**A.** (David McKinna) I think the issue is that we have got to learn to produce more out of less because we have a declining agricultural resource in terms of land, water, etc., for various reasons such as environmental degradation, urbanisation and so on; and our productivity has not grown very much. My first job was with the Department of Agriculture in Victoria, and in those days they used to invest very heavily in the best in research and development, the best people. My PhD is a product of theirs. That does not happen anymore. The Government of Victoria, the governments of Australia, now say, "It's not our problem; it's a private sector problem". But the private sector has a different agenda. So although I cannot answer your question about food security, I would say that Australia has got to improve its productivity. We did a major benchmarking study for a major food processing company, and it turned out that in Australia it costs twice as much to produce that product as it does in America and Europe. To a large extent it was because of yield; but the reason why they are ahead of us in yield is because they have invested in technology. So that is part of the answer to the question, but I do not have the expertise to answer the rest.

**Q.** *Robert Tulip, AusAID. My question is for John Glover. I am interested in your comment about the partnership with Dutch aid in the supermarket work in Vietnam and I am wondering what your thoughts are about the role of AusAID in terms of*

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\* The Q and A sessions were recorded and transcribed for inclusion in these Proceedings. Questioners and speakers are identified where possible.

*partnering with supermarkets to improve value chains, and especially in making markets work for the poor.*

**A.** (John Glover) There is a lot of investment from the European government organisations, particularly the Dutch, the Germans and also the Swiss, in developing the smallholder, to improve their prosperity and their wealth. It very much matches our own business model in METRO. We are investing in developing countries to guarantee supply. We have worked with some businesses and some donor funds from Australia, particularly in Vietnam, and that work has been very successful, turning villages into cooperatives and helping these people become good and efficient business men, and it has been sustainable. We ran a project about 4 or 5 years back in the north of Vietnam and it produced some great returns for the farmers. We had them growing a seedless watermelon rather than the old seeded type that was getting them 5 cents a kilo. I think there is a great opportunity, still, today, for those sort of funding projects, but the thing that I would emphasise, even though I did not speak about it earlier, is that there needs to be a payoff in the market. I have seen too many projects where there has been funding, and the farmers have grown the product and they have done a beautiful job, but there hasn't been a benefit because the product ended up in the traditional markets. So the farmer got no return for his work; there was no value actually added for that farmer, other than that he worked harder! It could be said he produced a better product but it got lost in the system. One of the things we aim for is to ensure the value is shown, by actually promoting the fact that these products are traceable; that they are from particular farms — and those farmers actually get paid more money for the work they have done in producing the products.

**Q.** *Shaun Coffey, Industrial Research NZ. We have heard a lot today about working through the value chain, but one of the questions that we have not really asked is, "What is the cost of cheap food?". We have not actually asked the hard business question: "What is the value proposition of food?". It is an almost philosophical question of, "What is it we want our agriculture to do in the various countries that we are working in?". Is the consumer actually connected well enough to that value chain to understand whether the non-nutrition, non-eating issues in food are actively reflected in the price, the environmental cost of food, and so on? That relates to a second question. Some of the figures that we have seen, about the massive urbanisation in Asia, for example, are quite similar to what was happening in Central Europe a little less than 10 years ago. When I started in agricultural science we had 19,500 dairy farmers in Australia. We have a little bit over 3500 now, I think. Globally there are 1.8 billion farmers. If we have that same type of attrition rate as we change our agriculture, what will we do with approximately 1.5 billion people moving from rural livelihood to urban areas?*

**A.** (Thomas Reardon) Just a comment: I think that there is a difference between consumers in, let us say, Australia, Europe and, to a certain extent, North America, that have a keen interest in the environmental consequences of various kinds of production regimes, compared to most of the developing country consumers who, I think, are focused on food safety and water quality. So to the

extent that there is an overlap between environment issues, which obviously there is in terms of fertiliser leaching, and pollution of the water, and food safety, that has become a matter of very keen interest for Asian consumers. It is shown up in consumer surveys, for example in China and in Thailand. I think the way this relates to Australian opportunities (and John Glover also emphasised this) is that there is cleanliness and respected food safety here. Branding of that quality, to try to reflect that sort of reputation, could be a valuable way of delivering both a greater market share to Australian producers in the Asian market, and acknowledging the sensitivity to food safety and water quality that is being felt in Asia.

**A.** (John Glover) The modern retailer has the capacity to communicate about food safety issues to our consumers: we understand them, very well. In Vietnam, for example, if there is an outbreak of chicken flu virus or swine flu, immediately our business increases. The wish for food safety brings people back into the modern business, because of the level of trust they have in us, and the fact that we are communicating to people about food safety, and we are also communicating about the benefits of what we do.

**Q.** *Jenny Goldie. I ask this question of Thomas Reardon with my ACT Peak Oil 'hat' on. I want to ask the 'energy equation' question. Given that so much of the market transformation is dependent on moving food, exporting food and moving it large distances, to what extent is the success of it dependent on cheap oil?*

**A.** (Thomas Reardon) I want to remark on that in several ways. First, let us look, over time, at a supermarket chain, or perhaps at the establishment of a supermarket chain within a given country. In the beginning, because the food supply situation is often traditional and you cannot get what you want in terms of quality, safety, price or consistency, there tends to be a relatively high share of your product that's imported from other countries. For example, in Indonesia, the share of fruit from imported sources is about 70% in supermarkets right now, and of vegetables 30%. They are importing carrots and potatoes, which is unheard of because of the weight and the cost, but these products are much better elsewhere. Now as supply chains improve, as John was pointing out, you tend to start sourcing more locally and you reduce food miles just because you are getting access to a better food supply chain locally.

Then as you plant your stores across a region where there are regional networks and global networks, you start to develop comparative advantage of various products in various places. So you might be sourcing your oranges from China, your apples from X, Y and Z, and there is a reascension of the import share in, for example, your produce section in your supermarket. In that case, then, you are paying greater transport costs and you have to find methods of compensating for that transport-cost change. What tends to occur is that coordination costs go down with the various networking and distribution-centre and efficiency moves of supermarkets, and you find (I see this internally in China as well) the procurement stretch of the arms is getting farther and farther across China to get various products. So they are spending more on transport; but then

they're shifting away from truck transport to train transport; they're improving the logistics of interface between the various kinds of infrastructure so the overall cost might either be controlled or go down.

Now if you find yourself in a shock situation where the oil price goes up quite a bit or the electricity cost goes up suddenly, I think that there is still a certain degree of flexibility in the system because they're in an early stage of reducing the coordination costs in many of these systems where there are large jumps. For example, going to a distribution centre network can get you 30–40% cost reductions in some of the transaction costs. So there is flexibility within the system to deal with some of those shocks, and technological answers to some of it, in terms of changing the mode of transport, etc. But in the end there will still be sensitivity of certain kinds of products, and certain kinds of sourcing channels that will be affected by the shock. I would say that the shock would not be as great as is imagined; usually it will be a modest shock.

**Q.** *Julian Cribb. John would you like to comment on that? Are you prepared for next oil shock?*

**A.** (John Glover) We usually find it is the oil shock that impacts on costs of the goods, but generally it's unlike here where, as Dave was saying earlier, the prices get frozen. If there is an oil-price shift, the freight cost are brought into the product and then of course the consumer pays — if the consumer is willing to pay. We just have to evaluate, from our understanding of the customer, what are the trigger points where a customer will buy or won't buy, or where they may downsize. For example, sometimes they might like to buy a size 88 orange, but maybe a size 113 is a bit cheaper. So we might change the mix and offer them a good quality product but perhaps it's a bit smaller to keep it within the manageable price range.

**A.** (Thomas Reardon) Just a small addition. This is a story from the US. When there was a transport-cost shock that suddenly reduced the demand, which had been very high in the US, for sweet peppers from the Netherlands, there was then a rise of greenhouse industry in Mexico and the southern US, with heavy investment by the Dutch. These same Dutch groups that had been exporting reacted flexibly, moved production to where it would be closer to their market, making the necessary investment. Then, when the transport costs went back down, they still had two 'feet': one in the Netherlands ready for certain kinds of products, and for the more 'commodity' products they were ready from the other place. Lesson: diversify your production source bases for this kind of shock, and then jujitsu the change so that it could even benefit you!

**Q.** *Peter Wynn, The EH Graham Centre, Wagga Wagga. My question is to Rufina and Stephen. Technology, innovation in technology, is very important for developing smallholder marketing chains, and yet innovation in extension is probably equally, if not more, important. You both mentioned the importance of women in developing production efficiency and also developing smallholder marketing chains. Have you got any innovative approaches for more effectively engaging with these women communities, bearing in mind that males dominate the society in these areas?*

**A.** (Rufina Peter) In PNG, the membership of the 'Women in Agriculture' is made up of women farmers but also professional women, and a lot of these are agricultural extension officers who currently are limited to extension work because of a lack of recurrent funding for doing what they are supposed to do. Having women organised into groups, especially women farmers, we find that women are willing to pay to come together and learn from each other's experiences. For example, at our annual general meetings in the last couple of years, we've had a day dedicated to displays of what each group of women has been doing in their particular locality. The innovations in the activities they've engaged in can be learnt about by others who come from across the country. The point is that women feel the impact of development, in the sense of the inequitable distribution of wealth that's coming out from the development process so far, and so they are prepared to move and do what they have to do. Women in Agriculture is a non-government organisation and its members really fund their own way to come in and learn from other women.

There is strength, I think also, because we have the women extension officers in our country's three tiers of government. Women have registered at all levels, down to the ward level, which is the most minute, and they can access services from extension officers also from the national and provincial levels based in the district.

Another point also is that the Australian program in PNG, the current program that ends in 2012 June, has three components. The first two are looking at institutional capacity building, one focusing on a particular research organisation, and the other looking at institutional capacity building for about six different R&D organisations. Their approach has been a move away from the traditional way of working with these R&D organisations: doing the research, getting the results, and bringing them out — an approach in which, let us say, the farmer was not the focus. That is what they have to do: their research agenda is to do the research and transfer the technology if and when they can. But with the current approach now the institutional capacity building has made the farmer the centre of service delivery by these R&D organisations. It is for them to get out and interact with the farmer, and see what the farmer needs. At the same time there is a third component in the program, which is the Agriculture Innovation Grant Scheme. So using what they learnt in the capacity building, there is a pool of funds now for them to draw from to go out and work with the farmers. This combination of innovation and looking at the complete value chain has created partnerships that didn't exist before; plus we still have the traditional modes of operation. I think it's really beneficial for the farmer.

**A.** (Stephen Mbithi) In Kenyan horticulture, women are in the majority, not a minority. The smallholders are predominately women. I'm talking about the people that actually run the small farms, who run the activities at the farm, such as grading, sorting and packing. I think we all know that there is no better hand than that of a woman in sorting out and grading, and so women form the majority of that work force. It is true that women make up the bulk of the people in lower paid jobs, and that is mainly because only relatively few of them have sufficient training, compared to the numbers of men.

As an industry, now, we are looking at innovative solutions. We just finalised a Practical Training Centre for the industry, run by the industry together with the government. It is aimed at making sure that specialised skills are imparted selectively — of course to everybody in the sector, but specifically targeting women, to make sure they have the skills necessary to be able to move up the ladder, the career ladder, in some of these organisations that deal with horticulture. Although women have most of the lower paid jobs on average, we also have many women as owners of smallholder farms, and in exporting companies. By that I mean companies that are purely led by a woman, and which are into export. So there are women in higher-ranked jobs; it's not that they are not there; it's just that we're trying to improve the situation by an affirmative training approach. Of course the training is for everybody, but specifically in this community it is targeted towards women to correct that situation.

**Q.** *Richard Etherington, Koconut Pacific. We are working with a brand in Australia, and internationally exporting out of Canberra: virgin coconut oil. We are involved in the value chain, right from the production in the Solomon Islands, to dealing with certification, organics and creating a brand in the Australian marketplace and internationally. I'm interested to hear, on the broader scale perhaps, David and John talking about Australia and Australia's lack of high quality brands internationally, and I'm wondering if that is something to do with the ownership of Australian production and brands? I know that Fonterra is a cooperative of New Zealand Dairy farmers, and a number of those other brands that you listed are, I presume, nationally owned, whereas I understand that most Australian brands are owned from outside Australia. I thought perhaps you'd like to comment on that.*

**A.** (David McKinna) My view, and I think John made this point earlier, is that Australia tends to be an opportunistic trader of commodities rather than a long-term marketer of branded products. We've had some very successful branding programs overseas previously, but we didn't stick to them. A lot of our exports are exported as commodities, and the bulk of those are processed meat, grain, dried milk powder, etc. — not a lot of products. There is no reason why we can't have strong brands; it's just that we haven't invested in them. Most of our food processing assets now are owned by multi-nationals. They have global brands and they produce those brands in the lowest cost country and market them around the world. In Australia we haven't invested in, and we haven't gone into, the rigours of good branding, which are consistency, and long-term relationships, and understanding that those are necessary. We just haven't taken the time to understand our customers. The best example of Australian brands is in wine, where there are some Australian brands around the world, because people have taken the time to market them.

**Q.** *Bill Bellotti, University of Western Sydney. A question to David and Stephen, based on quotes that you both made. David, you said something like, "One of the aims of modern supply chains is to drive costs out of the supply chain", and Stephen you said something like, "One of the problems of modern systems is getting a fair price to farmers". Are these two things incompatible, or can you give examples of innovations where supply chains are leading to higher prices for farmers, or more profits?*

**A.** (John Glover) The first part of the question is do we need to lower costs? There's a process of continuous improvement; we don't stand still, and we're up against competitors who are investing in technology and productivity, etc., so we have to lower our costs. Whether that translates into a higher or lower price for the producers or the vending chain depends on harnessing the market power. Individual growers used to be able to do that through their cooperatives or marketing boards or similar, but now they have all gone. There is no reason we can't have the best of both worlds. It's just that we haven't taken the time. We have to differentiate our product and we have to market our product and we have to brand our product. Certainly there are plenty of examples of people getting a premium for product, and a good example is Pink Lady Apple which sells at a premium around the world, through the things I talked about. It's about product differentiation, exclusive intellectual property, successful marketing, and it's about a royalty program that funds the continuation of that. There is absolutely no reason why Australia can't do that; it's just that we haven't been very good at it. The New Zealand Zespri is a fantastic case of what you can do. We should learn a lot more from the New Zealanders. They're much better at it because they've had to be, because they don't have a domestic market.

**A.** (Stephen Mbithi) Just to comment on the part of my statement about fair pricing to farmers. It's true that the consumer is always 'king', and therefore it's very important to keep the prices low because consumers want low prices. But there is a cost to low price, and we need to know that. Of course this is not an apology for inefficiency; we must not encourage production inefficiency in the name of trying to be fair. But if we do not have a mechanism that also addresses the producer end, then you're going to have a lot of poor people across the world, because you've got price imperfection, in terms of pricing. There is something called ethical buying, and I think it should be the counter-balance to keeping prices low for their own sake: making sure the prices are low, but also that the production is ethical. The two objectives can be achieved. There is a lot of target ethical buying now happening from many supermarkets. I'm sure my colleagues will know lots of work being done by many supermarkets, at the moment, which are deliberately sourcing from smallholders and labelling their produce as such, as long as it meets the threshold of food safety. It is to show the consumers that, "Yes, we're doing something about everything, including ethical buying".

**A.** (Thomas Reardon) I think that both processors and supermarkets depend on innovation investments and productivity investments by farmers. As John, I think, was pointing out, you can't kill the golden goose; you have to keep it alive. If a retailer wants to get a lower price to the consumer in order to be more competitive, but also offer a sufficiently remunerative price to the farmer to keep investing in productivity gain and quality gain, then somebody, something, has to give. What I've seen is that usually the ideal element that gives in the system, from the point of view of both the retailer and the farmer, is that the logistic segment becomes more efficient and the wholesaler tends to lose. So that's what forces some consolidation in the wholesaler segment and also, depending on other conditions like infrastructure costs, etc., it will influence what portion of the price still gets to the farmer. Here is an example that I saw



Stephen Mbithi, John Glover and David McKinna on the panel during Monday's Q and A session.

in India recently, where a retailer and processor is buying milk in Rajasthan and in Uttar Pradesh. In Rajasthan they are giving essentially 21 rupees per litre to the farmer. The same company is offering 17 rupees per litre to the farmer in Uttar Pradesh. I said, "Why is that?", and the reply was, "Well we want to give the maximum price and still be able to be competitive because we want the farmers to invest, but the costs of electricity, of transport, bribery costs, etc., are much much higher in Uttar Pradesh so we have to take that out of the farmers' bill, essentially because we are in a competitive situation on the retail price". So the conditions can be improved and allow some of this inherent tension between prices at each of the ends to be reduced.

**Q.** *Julian Cribb. A question to the panel. When you do reduce the price to the farmer, the farmer tends to take it out of the environment: it's the soil or the water or the biodiversity that gets hammered. What is the solution to this problem? How can we build protection of the agricultural eco-system into the way we price food?*

**A.** (Stephen Mbithi) The production must not be just production for the sake of food. There have to be some ethics in production, and one of the ethics is that you have to be environmentally sustainable. You are not just producing because somebody is hungry, so you need to produce food responsibly so that it can be sustainable. I think, and my colleagues around the table will know, that many of the mechanics of market access include whether or not you have grown sustainably. You measure this with a 'tool', and the tool is always a standard, and therefore if that standard is properly enforced it becomes futile to not respect the environment for production. So food production is not just about food, product X. It's about the processing and many other aspects as well.

**Q.** *Julian Cribb. John is that kind of standard built into the GAP concept?*

**A.** (John Glover) We look at collaboration with the farmer, in the context of the competitors, what the pricing is, and the affordability of each item. We look at the varieties. We don't overwork the soil, but with any particular farmer, if we have to be in a competitive situation, we'll look at how we can improve that farmer's yield. It could be by the variety we use. We've had farmers growing tomatoes up on a trellis, using a different variety that gave a higher yield, and underneath they were growing lettuce! We work with them to get greater returns out of the acre. While we may pay them less for the tomato, their return for the acreage is what we've really got to look at.

**Q.** *Melanie Brock, Meat and Livestock Australia, based in Tokyo. I've been in Japan now for 20 years. At the moment I'm a brand manager of Aussie Beef and I'm also a marketing person for the commodity of processed beef being shipped to Japan. Prior to starting with MLA last year I had my own business, importing product — food and beverages — from many markets in the world, and in that sense I felt like a bossy school teacher because I used to have to chastise the exporters for sending me rubbish and expecting me to pass it on to the Japanese market and the very discerning consumer. I used to be well known for giving them lists of claims, etc. I know that we can perform very well in Australia, but I know that sometimes we're pretty pedestrian in terms of what we try and pass on to the overseas markets. I'd be interested in hearing from Richard Lovell, being here in Australia to buy as opposed to being here to sell, what he looks at and what advice he might have for exporters? I apologise for being grumpy about exporters — it's just that I remember all those horrible times I had to deal with the claims!*

**A.** (Richard Lovell) Thank you Melanie. I think in Australia you should really be positive. Over the couple of years that I have been here, I've noticed that Australia has good products but maybe you don't understand the requirements or needs of the Asian market. CP can put your items into 50 countries, but I'll just talk about Thailand. You need to understand the marketing side of the business, and the Thai point of view, how we can use products in the Thai market — and it's not always about the cheapest product. We at CP we may be the largest in Asia for chicken but we are definitely not the cheapest; we understand how to create value out of our products. In Thailand we have Snowy Mountain water, and Bega cheese is there, and they are doing fantastically well. They're not the cheapest but they understand what the Thai customer needs. Now, during my presentation earlier I was going to talk about avocados and half-shell mussels, but the time ran out. Two years ago I met with avocado farmers in Queensland and at that time they were exporting, I think it was, 300 or 500 tonnes of avocados into Thailand, and they were saying "Our avocados are great, they are the best, blah, blah, blah, but we can sell thousands more". I said, "What you need to understand is how Thai people are going to use the avocados. How do Thai people use avocados in their own cuisine? They don't! At the moment they don't! But if you can get that product into Thai cuisine, into a Thai dish, that would be a different story." Luckily, Japanese food has come to Thailand and it uses avocados. Last year there were 1700 tonnes from Australia, of Queensland avocados. Then you can push your product even further. Here, I've heard many many stories of leading suppliers that are going out of business because they can't supply Coles and Woolworths any more. However, if local markets are a problem, there is enormous opportunity in Asia, and also in several countries in Africa. Africa is an up and coming continent. Having offices in those countries, such as the MLA in Tokyo, and Austrade and the Victorian DPI with offices in Thailand, is a way of linking up with people in those countries, investing overseas in offices, and building brands. Bega has done a fantastic job in that, with processed cheese. They understood that, okay, Thai people don't eat sandwiches — but they are starting to eat them now! And it's because there's been investment into that marketing. It's happening overseas with New Zealand half-shell mussels as well.

**Q.** *Anthony Leddin, Valley Seeds. This is a question to David. You say the supermarkets have the power. I thought the consumer would be the one that has the power, and the supermarkets would just conform to whatever the consumer asked for: if consumers are asking for cheap prices, that's what the supermarkets are going to give them. So from the point of view of the Australian consumer, is it better to run an education program about food and the importance of agriculture for food in Australia? I think that's been belittled and instead we're seeing cookery shows like MasterChef and others. That is the only message about food that people are getting, out there in the public. They are not getting the true message that the number of choices you are going to have on a shelf is getting lower, there is less research, and the food choice is going to be a lot less. Should we look at education? How do we do it? How do we get the message out?*

**A.** (David McKinna) The first part of that question said that consumers buy what supermarkets put on the shelf. Supermarkets would argue that they respond to consumers' needs and they do research, etc. But the supermarket agenda is very much about putting products on the shelf that sell profitably, that turn over quickly, and that don't waste as they move through the supply chain, and if that lines up with what consumers want, that is a good thing. Certainly there is a need for consumer education. Consumers are quite ignorant about food. For example, consumers expect to buy table grapes 12 months of the year, but when I grew up in the country table grapes were only around for about 6 weeks. Now consumers expect them 12 months of the year and they expect them to be good. Consumer education is important, and the ethics in the production system is important. People will tell you that we want to buy Australian food and we care about ethics, and we care about the environment, etc., but the bottom line is they buy on price and performance. There is only a small percentage of people who buy with ethics high on their list. People certainly, as consumers, have some ethical, environmental aspirations, but they're lower down in the priorities. We certainly do need to make consumers more aware. What if consumers were aware that when they buy the private label tomatoes from Italy, that's closing down a factory in Echunga in Victoria. They don't make that connection because they are not told about it. So I think we need to do a lot more about that — but who's going to pay for it? It's not a government role, and the food companies are increasingly multi-nationals which don't have a vested interest in pushing a particular country's produce. But I do think there needs to be education. There are some good things going on, such as work by the MLA where there has been some good education over the years; and Horticulture Australia is another example. We need a lot more — but who is going to pay for it?

**Q.** *Dr Albert Rovira, Adelaide. I've enjoyed the talks very much and I'm impressed by the spread of supermarkets in Asia. One of the things that concerns me is an example I came across earlier this year, when I was up at Hervey Bay and Maryborough, in Queensland, and the floods had stopped road transport getting into those two quite big towns. Within three days there was absolutely no food left in the supermarkets. Now my concern is that with the development of supermarkets in Australia we've seen less demand for local food because it's cheaper to bring the tomatoes from Bundaberg than to bring them from Adelaide. As a consequence we've become very very dependent*

*on road transport. So my question is, with this explosion of supermarkets in Asia, how would Beijing or Bangkok cope if the road transport were blocked? It's a negative question, but I think it's something that needs to be thought about.*

**A.** (John Glover) This is something that I guess we face a lot in China with transportation. One of the weaknesses in the Asian and developing markets is the road infrastructure. China's doing a lot of work. I couldn't give an answer really related to the situation you are talking about in Queensland — how we could really fix that. It's an area that we've still got to work on. We do source from distant places. For instance, I'll talk about Vietnam, which is a classic market for Asia. You've got a rainy season in the North and a rainy season in the South, and there are landslides, and the railway tracks and roads are cut. We actually now have stores in the North, the centre and the South. We've got growing programs for the basics, for the staples, in the North, so that if the roads are cut and we can't get supplies through from the central highlands we can buy in the North. But then it becomes a demand and supply story, and straight away you start to see when the demand goes up, in those sorts of instances, and it would be like Adelaide tomatoes. Everybody goes to Adelaide, so the price is doubled. And that's what bounces up all the time, so then it becomes an issue of affordability.

**A.** (David McKinna) Can I add one point to that? I think in an era when we are going to see diesel hit \$2.50 a litre, that the whole issue of logistics and transportation will change. We're seeing crazy situations where mangoes are grown in Darwin, shipped to Adelaide, go through a Woolworth's warehouse and are then shipped back to Darwin. When diesel is \$2.50 we won't be doing that. The current wisdom in logistics is that you have big highly efficient distribution centres. I think that balance will change, and we will have a lot more local buying.

**A.** (Thomas Reardon) This is a fascinating question to me, partly because a week ago I was ending a 10-day trip into two areas of China looking at rice in particular. I was actually talking about this specific question with the Chinese Government and with the various companies, and it appears that they have three strategies to deal with this situation. In some of these provinces, for example the most dynamic and richest provinces, and in large cities there, they are very concerned with their food security, in relation to SARS, etc. Their roads actually did shut when there were some transport-costs issues and rains, etc., and they had some problems. So what they're doing is taking their wholesale markets and consolidating them into larger logistics wholesale centres. They're doing that with consultation from the supermarket chains, the large processors of, say, grains and of other products. And then they are designing a diverse set of logistics, one of which could fall and the others would stand. So they have canal systems that they are improving, railway systems interfaced with the wholesale market and then the highway system interfacing. So that they're getting fewer points and each point is more diverse and better linked to the various possibilities for transport.

A second very fascinating point in this discussion was that they'd recently sent the equivalent of a trade mission from their province to Heilongjiang Province



John Glover, David McKinna and Margaret Reid on the panel during Monday's Q and A session.

which exports rice. And they said that when they went there, there was another trade mission from Shanghai there, competing to make contractual relations between the provinces and targeted sub-cities, to help their traders set up operations to have sourcing operations in Heilongjiang Province so that they would have essentially first dibs. So the same thing that China's doing internationally, in Brazil and other places, they're also doing within their own country among the provinces — setting up deals to be able to reduce risk in supply.

The third point is that then locally they work on diversification and self-sufficiency within the local area; but they don't depend on that alone. They don't depend on the trade deals and they don't depend on the diversification of infrastructure. They want all three. I think it is quite interesting.

**A.** (Richard Lovell) Within Thailand, what we do as in CP Group is to have what we call 'compartmentalisation'. So whether it's our poultry, our swine, our prawn industry or fish industry, within a 50 kilometre radius of that processing centre will be the feed mill, the hatcheries, the grow-outs, and the farms, and we export from there. That helped us during avian flu (which came from Europe, by the way; we didn't start it). So when some disaster like that happens, we can just shut off that area, process the meat and keep it there. Obviously prawns are also based all around Thailand for the same reason. The floods affected us this year, and they affected us last year. This year in Thailand 10% of the prawn aquaculture has been wiped out because of the floods. An aspect of CP that I didn't mention this morning was that CP is also largest in the world for rice production. We have an enormous milling facility about 100 km from a major port. We used to bring the rice to port by truck, the whole way to the port, and ship out from there. Nigeria is one of our biggest markets, for example. We had the same issue with floods, so we've actually built an inland port so the product is loaded on to containers in the canals and it is shipped. This port, it's got ships, everything, inland. So we don't have to worry so much — and actually the road system in Thailand is still pretty good anyway.

**Q.** *Kathy McGowan. I also would like to say how much I've enjoyed today and how much I've learnt. I'm currently working as a consultant to Rufina's group in Papua New Guinea with the Women in Agriculture, and my question is to several of the people here: Margaret, to you with your review of AusAID, and to the Asian Development Bank and to ACIAR. Obviously Papua New Guinea is an emerging market in terms of developing its supermarkets. Dr McKinna said the consequences of not doing this properly could be the loss of our small-scale farmers. So my question is at a macro*

level. How do the donor groups think about passing on these lessons to countries such as Papua New Guinea and organisations such as Papua New Guinea Women in Agriculture? As we heard, that group is just beginning to work with their farmers, building coalitions, doing all the training that we need to do so they can provide to the supermarkets — they are at that development stage. So I would be really grateful for some comment. And also the private sector, maybe CP Foods, might have some comment about the best ways we can actually design countrywide systems so that the end result is actually healthy people, effective markets and ethical supply systems that respect both the people and the production systems and the environment we are working with.

**A.** (Margaret Reid) Within the Aid Review what we said was there were four major themes that the aid program should look at, and then there were thirteen segments underneath where we believe that Australia has something it can offer. They weren't ranked in particular order, but in fact agriculture and food security were the first of the thirteen that came to mind for the five of us when we were talking in particular about this. Now, I don't see that aid as being the sorting out and running of supermarkets, or promoting them, or anything like that, but an aspect of the aid program has to be relieving poverty, which means assisting those who are attempting, as subsistence farmers, to get enough food to feed themselves. In New Guinea, as elsewhere, programs where we can actually make a contribution need also to be programs that the recipient country wants. We have said that Australia should not go round saying, "We think you should do this", or "We think you should do that"; "We're good at this"; "We're going to do a program on that" — and that can happen with aid programs and you achieve very little. It really is a question for New Guinea in this instance to work out what we can do that fits into the category of assisting with agriculture and food security, and then putting a program together that will enhance that, relieving poverty. It's not designed for supermarkets profits and anything of that kind. Our aid program is principally to target the people, over a billion on this planet, who are living on less than \$1.25 a day. It is not for us to say what the programs will be but to offer what assistance we can, the expertise that we have, which will assist in meeting those objectives, and I think there is quite a lot that can be done in New Guinea. The aid program is not there to prop up governments, assist governments. It's for people living in poverty.

**Q.** Jon Tanner, Wood Processors Association, New Zealand. I'd like to pick up on a point that Dr Mbithi made in his presentation. He talked about the growing business around certification, and I think it really is a massively growing business and I'm just wondering where this thing is going. Representing the New Zealand wood industry, one of the things we have to comply with to trade internationally is the Forest Stewardship Council. It sounds like a great thing, but the Forest Stewardship Council's certification earns our business nothing — not a cent — but we have to comply with it. My members complain no end about having to comply with things that don't earn them any money but simply add hundreds of thousands of dollars of costs in the supply chain. How do your members feel about having to put seventeen stickers on boxes before they export? Where is that going for small-scale producers who have to comply with never ending, it seems, certification schemes?

**A.** (Stephen Mbithi) I will give you an example. It costs about US\$1000 to satisfy one certificate, on average. That's quite low compared to other standards that actually cost US\$2000–3000, but let's take US\$1000 for one certificate as an example. If all the producers in Kenya, 1.5 million farmers, want to have certification, each one of them at US\$1000, then for 1.5 million smallholders I think the total money paid would be US\$1.5 billion, if my mathematics is correct. Now, the total exports from Kenya, for fresh produce in total, everything, fruit, vegetable, flowers, is US\$1 billion. So the total cost of certification would be higher than the total exports for one certificate.

Now, I think the point is made that you could actually drive farmers out of business if you do not deal with the whole issue of certification. The same is true for emission standards, and you can add the labour standards, you can add the ethical standards, environmental standards, the food safety standards. The answer lies in making sure that, yes, we maintain the principle of ensuring that standards are kept — and there's a way of verifying that through a credible certification system. We would like to see supermarkets, especially, working very closely with producers to create the necessary harmonisation. Of course, that's already ongoing with, for example, the GFS process (Global Food Safety). As producers, we really support this. The supermarkets are in a quest at the moment to consolidate standards in a GFSI (Global Food Safety Initiative). That's more for the post-farm-gate set of standards.

Pre-farm gate, we think that the solution will lie in consolidation of private standards, making sure that there are fewer, and using market forces. I don't think there will have to be a role for regulation. I know there was a move last year to force some kind of discipline onto private standards and I think that flopped. I think the best tool will be a market tool. So, yes, it's a nightmare. How do we do it? Obviously, every farm is not exporting to all the markets, so not all the seventeen stickers have got to be on one box, but, frankly, most farms will still have to satisfy at least three or four. Now four certificates are US\$4000 just for the certification costs, and there is compliance cost as well. So it's a nightmare out there, and there must be consolidation.

We complain about the private standards, but let's also make sure we understand that official control systems by various governments sometimes can be even more expensive. So it's a situation that requires a policy approach, and, obviously, more collaborative approaches could help to ensure that at least governments work together to see whether there could be some formal harmonisation. I know it's very elusive but we've got to keep on chasing this. It's the only way, and it's not only developing countries crying for change. I can assure you that the biggest fights on lack of harmonisation are between Europe and USA, because each uses a slightly different system and they keep on having issues between themselves on lack of harmony.

**Q.** *Joshua Scandrett, University of Tasmania. I'm a recently returned Australian Youth Ambassador for Development; I was living and working in Vietnam for a year. I'm also one of the dozen or so young scientists who have been sponsored by the Crawford Fund to attend this conference. I would like to take this opportunity, and I'm sure I*

*speak on behalf of all of us, to thank you for the donation. It's been a very beneficial experience, so thank you kindly.*

*I do have a question. Thomas Reardon, you spoke really well I thought about the dichotomy that farmers face in developing countries between those who do have access to current infrastructure and possible access to markets, and those who don't and who have the possibility of really being left behind. Given the talk about petrol prices and potential natural disasters and also the comment that AusAID's budget is going to be \$8 billion in the not too distant future, does the panel think that there should be a similar dichotomy in the way the AusAID budget is applied or spent to ensure that those farmers in the latter dichotomy, the ones further away, aren't even more increasingly disadvantaged as these fuel prices and things come into effect?*

**A.** (Thomas Reardon) I think that's an excellent point that points to different kinds of investment that are needed in different regions. I'm just thinking, for example, of Uttar Pradesh, a small state of only 200 million people in India. Half of them, about 100 million, are more or less in zones that are within hailing distance of Delhi and are in rapidly growing markets and there's a lot of possible investment. There you need the jujitsu kind of approach, where you're thinking smart about where the bottlenecks are in building the supply chains or making them flourish. It could be in the milling sector, or it could be in the cold storage sector; it is not basic drainage infrastructure or revamping irrigation that's as necessary in that area. Then in the areas of the hinterland and the eastern part of India, you have problems of flooding and basic infrastructure problems that need electricity, which need to be targeted.

Another point I want to make is that very often, I've noticed, both governments and donors think in terms of finding the area with the poorest people and investing there. But it turns out that there are poor people also in those dynamic areas who are missing links with the market and missing assets that could help them to make links; for example, they might be skills programs, or education, or things related to cooperatives development within the area that's more dynamic but still has poor people. Also there tend to be relations between the dynamic area and the hinterland, with businesses that are building in the dynamic areas that invest for part of their operation, such as commodities production, in the hinterland area. They may grow their niche products or high quality products, such as in the case of seed potatoes, in the western part of Uttar Pradesh, and commodity potatoes in the other part. So helping define ways to make those kinds of linkages of investment, which have to do with financial instruments and credit in subsidies, available to make those kinds of investments, would also be good.

**Q.** *Reece Kinnane, from Oxfam Australia. My question is to the panel and also maybe to the moderator. I want to ask you to discuss the world's hungry and your insights on how this supermarket revolution is affecting them: in particular, the large proportion of the world's hungry that are involved in food production themselves and who sell any excess they may have for profit.*

**A.** (Stephen Mbithi) A quick comment. The supermarket revolution could in a very strong way affect very positively the hungry situation across the world, if it's well handled. You might ask, "Who's going to be doing the handling?". I think that if the price mechanism is correct then it could be a driver to rural agriculture and a good reason for serious farming. But if not well handled — if, for example, it drives smallholders out of production systems, then I think you will have maybe two or three times the current population being hungry. It could exacerbate the problem or it could actually solve the problem. It all hinges on whether or not there will be a deliberate effort of inclusion of smallholders into the value chains that supply the supermarkets. It should be remembered that for the majority of the smallholders that are producing across the world, this is their only way of livelihood. So while the supermarket revolution could be beneficial, there'll be need for some inclusion.

**A.** I think the problem of world hunger is much broader than the supermarket revolution. We can look at supermarkets as one way of contributing to solving the hungry problem. We all recognise that this is not the one and only solution, but it does have a role to play. And as you rightly pointed out there are different situations of hunger. There are cases when the solution to that doesn't come from the market, it comes from self-sufficiency. But I think the contribution of this conference is to locate the supermarket contribution in terms of how can you maximise its contribution to solving world hunger, without saying it's the only solution.

*This completed Monday's Q and A session.*

**Q and A at the Tuesday breakfast**

Panel: Professor Allan Fels AO and Professor Thomas Reardon

**Q.** *Barnaby Joyce: apparently the ‘author’ of the Birdsville Amendment. I am surprised as to why the sustained selling of milk below cost was not seen by the ACCC to be a breach of Section 46(IAA) which is the Birdsville Amendment. Why did the ACCC see it as they did, and what are your views on that?*

**A.** (Allan Fels) I was a little bit surprised at their finding that Coles wasn’t selling below costs which would have triggered the Birdsville Amendment part of the Act — which will be attributed to you for ever, for better or worse! They also seemed to say that that bit of the Act requires some kind of anti-competitive purpose and really they said it was another purpose altogether. It wasn’t quite to harm competitors. To my mind it was probably a competitive purpose. Where I possibly differ is that I thought on the whole that’s good competition, that’s competition that works well for consumers. It can ultimately hurt farmers and processors to a degree, and I would prefer the slightly more rigorous test under Section 46. However, as I said earlier, I would really like to see the Parliament have a deeper look at Section 46. Leave the Birdsville Amendment alone if they want to, but, just like the rest of the world, add the so-called ‘effects test’. That would strengthen Section 46. It is really a difficult piece of law to operate and it is one which is applied to big business. There has been huge resistance by the Business Council of Australia to a stronger abuse of market power. I ask myself now why is it? And then I realise it’s because the other bits of the Act are often of less concern. If you have a very concentrated industry with only maybe one competitor, then you’re not really worried about cartel laws, because there is no one to collude with. Coles and Woolworths are not going to collude over prices. Likewise there is no one left for them to merge with, hardly, so they are not so worried about merger laws. If you start saying well what about laws dealing with people that have market power and abuse it, you run into huge political resistance, and also in court they put up an enormous fight and the provisions of the law are quite hard to prove — which is one of the reasons the Birdsville Amendment went through.

**Q.** *Sharman Stone MP. Professor Fels, thanks for your talk. I think most of us would agree with you about having to have the ‘effects’ issue introduced into our competition consumer law; it just makes so much sense. We have such an emphasis in our legislation at the moment on short-term consumer interest, not on the long-term impact or effect on choice. One of the problems in my electorate is that Heinz and Coca-Cola Amatil have just announced big retreats, basically ‘shut downs’, and they tell me that their issues are the pressure on them to supply the Big Two’s home brands, which has significant impact on their own profitability, their own capacity to protect their own brands and so on. Ultimately that has an effect on choice, consumers’ choice. So I am wondering, how do you think we need to go about making sure that we rearrange our legislation so it takes that long-term look which not only includes an emphasis on the consumer but also the supply chain, which of course ultimately affects consumers’ interests. The other thing is, I’m interested in your comment on food labelling and the part it plays in consumer choice and the shutting down of consumer transference of*

*information about who, in fact, is behind the generic brands which are doing so much damage to our Australian manufacturing?*

**A.** (Allan Fels) Just on the last bit, I haven't got too much to say on that, other than that there is some potency in the 'misleading and deceptive conduct' provisions of the Act, and some of these associated laws on packaging disclosure, but that is quite important, and it is important with imported brands. Entry has been made a little bit easier over the years by lifting some of the parallel import restrictions, and as so often happens with reform you then need to strengthen regulation in another area, which is including disclosure and so on, if it's not to have harmful side effects.

On the first point, the Act, in theory at least, and in generally in practice, takes a longer-term view of the interests of consumers. It usually looks at the impact of its decisions over two to five years. There is a further fiery argument about whether the Act is exclusively concerned with consumer benefits in terms of low prices, or whether it is concerned with the broader concept of economic surplus, which includes some producer efficiencies. On the whole, the bias, however, is very much to the consumer end, as your question reflects. Personally, I'm not uncomfortable with that, and I'm not uncomfortable with there being generics. There's been a long-term shift of power from manufacturers having all the power and supplying weak retailers, to retailers getting more and more on top, which brings quite a few benefits to consumers. It's almost inevitable, maybe, that the retailers start to get more of a handle on producing their own products. It's another form of competition that seems to be the inevitable drift of the market and will have very bad side effects, particularly for people in country areas like you.

**Q.** *Would Professor Reardon like to comment on these issues in terms of the changes in developing countries?*

**A.** (Thomas Reardon) In these countries, especially let's say in the first wave countries, where the supermarket revolution has gone farthest, the same sorts of issues are emerging, sometimes with a very sharp debate and related conflict. I want to mention briefly the effect on the supply side. In 1999 there was a massive, really essentially a war between the retailers and the suppliers, especially the food processing industry and the wholesalers. There was such a rapid influx of multi-national retail firms and rise of larger retailer firms in Argentina that the pricing competition became extremely fierce, and also the conditions that the retailers levied on the suppliers became very onerous. For example, they would pay the suppliers 180 to 365 days later, as opposed to the standard 30 days or 15 days. Essentially they were taking loans from the suppliers to build a treasure chest of war funds to finance their investments against the others in this extreme intense competition amongst the supermarkets. What happened was that in one year 20% of all the food processors went out of business, and that caused a national crisis and also caused a crisis among the retailers because they had forgotten that they could kill the golden goose that was supplying them the produce and the products. So there was a scandal, a change. They went to a competition code — in this case that was voluntary but actually with teeth of legal and legislative backing to it.

The same thing has occurred now, or is starting to occur, in Brazil as Carrefour takes over, or is trying to take over, the leading Brazilian retailer that is already partly merged with another French chain. So these topics are important, but in the balance hangs the needed investments by suppliers to increase quality, safety and productivity, and so an equilibrium is needed.

**Q.** *Bruce Billson MP. Good morning, Professor Fels, and thank you for your presentation. I'm curious about your view on the ambition of Section 46. When it was introduced it seem to promise much, but after Boral and other examples perhaps it has not delivered what was expected and instead of a prosecution you get slapped with a wet lettuce leaf. I'm not sure if it is necessarily worth the effort in some cases. It was thought to supplant Section 49. Among stakeholders, Section 49 has become quite popular once again. My understanding is that there has never been a prosecution under Section 49. What are your thoughts on the life of Section 49 and whether Section 46 has lived up to its ambitions, or whether it is really there but not delivering its aims as it was intended?*

**A.** (Allan Fels) I think Section 49 is dead, buried and gone forever. It was somewhat miraculous that it disappeared. There'd been one report after another saying that it should go because it discouraged discounting. It discouraged price competition to a degree, and at the same time it didn't really have much of a pro-competitive effect. So I don't think it's been a particularly good law and I don't think people are going to revive it again, although after seeing what happened to the Birdsville Amendment, you never know. On Section 46, it is tough going, for reasons I mentioned, and also there is a deep inherent problem in it, in that you don't want to discourage genuine competitive behaviour by established big firms with market power. When ALDI enters the market, you don't want Coles and Woolworths to fail to respond — and conceivably that could happen here and there. I think the case against Section 46 has been made far too strongly by the business lobby, just because of personal interest. They keep talking about the chilling effect on competition. I don't think it does have that kind of effect. There is scope to strengthen it. A few years ago it was marginally touched up by the Howard government, but I thought that was pretty marginal. It was a bit of window dressing, which also created a vacuum for the much stronger Birdsville Amendments, but they're sensible amendments. So the way I see it, there is a sensible economic rationale for bringing in an effects test and for slightly strengthening the procedures. For example, you could have a 'cease and desist' power where the Commission could immediately stop certain behaviour by business, [which] could appeal to the court. At the moment we have to go to court, prove an injunction, get an interim injunction, all sorts of things. So there is scope for improving the weak abusive market power provisions procedurally and in terms of the wording of the Act. I really hope Parliament thinks about that because it makes sense. It is extremely rational, and other countries do it.

**Q.** *Mike Kelly MP. One for Allan first. There's a lot of focus on the Coles Woolworths dynamic, but of course one of the big factors, which may be the most important for Dairy Farmers and the like, is the large processors in the middle, such as Parmalat, Fonterra, etc. With the deregulation and what not, farmers in my area, the Bega valley,*

*have survived a lot of that, by carving market niches, by being in that cooperative space, in aggregating. We have this periodic re-approval of collective bargaining. I want to 'unpack' that that collective bargaining issue a bit more. Should we just give our farmers that blanket approval, that provision to enable them to collectively bargain in the context of having to deal with these large scale concentrated processes?*

*And one for Professor Reardon. We've seen this huge growth, in the developed world, of the impact of eco-labelling. Just recently I saw how important that is in Europe, but all the developed world is definitely going down this road. It's become a significant factor. Have you seen any indication in the Asia Pacific region that eco-labelling could become a significant issue in the food market there?*

**A.** (Allan Fels) As you all know the milk famers used to get a minimum price, and that went in 2000. In a sense, that is the ultimate and most effective way of dealing with the problem, but there are lots of problems with that as a policy, and anyway it's gone — it wasn't really going to last, that was pretty obvious. Then, to add to the problems of the farmers, the national competition policy, the Hilmer report and so on, made them be all covered by the Competition and Consumer Act. They didn't get an exemption. It used to apply just to big corporations, not the small famers, but now it covers them as well, as part of having a universal law. So they're a bit caught. Now, to slightly reduce the impact, as you know, the Act has been softened to allow a little bit of collective bargaining. Your question is asking whether maybe we could go a bit softer still, make it automatic, and so on. That is not out of the question, but I think it's not going to change the fact that the farmers have an inherently weak bargaining position. No matter how much they work together, there is going to be someone that's going to undercut them, and so collective bargaining, even given an extra push, won't have much more than have a marginal impact. It might help them a little bit. Personally, I'm not that thrilled about that idea, but I do acknowledge that maybe they could get a slightly stronger role. The ACCC goes over the collective bargaining arrangements very closely and has been fairly restrictive in what it's about.

**A.** (Thomas Reardon) I'm addressing two questions. One is the point that was just made, and the other is eco-labelling. I will start with eco-labelling and then I will go back to the point about the bargaining power of farmers. Food crises, including food safety crises such as the avian flu and issues of any kind of pollution of groundwater and other sorts of issues, like SARS, all tend to have an advantageous effect on modern food processors and modern retailers and wholesalers, because those entities are believed to be, and are, I think, seen by consumers in the Asia Pacific region as safer and more able to deliver on traceability. Eco-labelling is part of that trend. Probably the general process of labelling and branding is part of that trend. You saw, for example, in the cases of CP and METRO that we heard about yesterday, that during the avian flu crisis their sales went up and their position was strengthened because they were able to ensure safety to the consumers. At the same time, eco-labelling is more and more important to the middle-class consumers in Asia, as part of a signalling that the water is safe and the food safety problem is perhaps minimal. So it's a good investment and I think Australia's very well positioned to be selling safe products into the region with believable certification and labelling processes.

The second point was on the bargaining power of farmers. This is a very interesting issue because it's very often said that cooperatives and farmer associations are powerful means of bargaining for prices and keeping at bay possible predatory practices of retailers and processors that want to shift the profit equation in their favour. Generally this hypothesis has not actually been tested by research. In recent work in Chile, where they actually tested this assumption, they found that it had no effect. In other words, the cooperatives were unable, either banding together or separate, to actually get significant price advantages from their association. Why is that? Part of the reason I think is what Professor Fels said: that in situations where you do have already a concentrated industry, which is certainly the case of food processing in most of the developing countries, you are a seller and you have two buyers or three buyers. You can't send them away. You can have laws and groups and shout, but you still come back down to reality. The buyers might say, "It's just us two again talking. That was an interesting discussion we had yesterday. Now I have three alternatives, two of which are in other countries, and I'm trying to decide which of you is the best supplier. You have the law on your side, you have a co-op on your side, but I'm the buyer and I have all the power on my side". Okay. I ask retailers around the world: "Name the best exporting country in the world". "Chile." Within maybe a half a second to one second they say, "Chile". And I say to them, "Why did you say that so quickly?" and they say, "Because their answer is always 'yes', because that is the only answer the buyers want to hear". The buyers have the bargaining power. You can't really gain a long-term advantage as a supplier in the bargaining power. You have to adapt to the market, which is, I guess, an unpleasant message, but this is something that I've seen in many countries.

**Q.** *My name is Melanie Brock and I'm based in Tokyo with Meat and Livestock Australia. I've got a question for Professor Reardon and it's not about the Birdsville Amendments because I'm not very familiar with those particular amendments. In any case, I would like to refer to the comment you made in your presentation, which other people have touched on yesterday, about the need for exporters and, indeed, producers to be market-transformation ready. I'm not suggesting that we have to keep saying "Yes", as the Chileans have proved is so successful, but I was wondering what advice you have for Australian exporters, and how you believe they need to position themselves to take advantage of the growth you see in demand?*

**A.** (Thomas Reardon) Yesterday, certainly, the people from METRO and CP Foods made very important points. They're clients that are buying products and positioning food in the market, and their advice included several things that I'll add to. One is that it really helps if you have very active export officers in the various countries that you're exporting to: not just to collect general information but to keep their ears to the ground and have very active constant relationships with supermarkets, processors and specialised wholesalers. Secondly, I think that there's really a very big advantage to not working through general wholesalers. This is the point that was made yesterday. General distributors and wholesalers don't really want to differentiate your product and be a client to you in the sense of positioning you competitively. They're looking for where the biggest margin is and they don't have an incentive really to differentiate your product. What you need to do is to have the list of the

specialised dedicated wholesalers in particular product categories as part of your arsenal, and then of course the very best situation is having a direct relationship with the main supermarket chains.

For example, I talked with somebody from the wine sector yesterday about this. It's important to not just be selling through a general wholesaler of wine that has Chileans and Californians (I'm from California) and all sorts of other wines that are available, and is looking for the price bargain. Rather, have a direct relationship with the supermarket, have a deal that you can make; and this is the third point. Retailers in general don't want to deal with many small niche players. They do not have the time. They want a one-stop shop. I've seen an interesting thing that happens in the US: a bunch of different smaller or medium producers have a set of product lines, such as dairy and nuts and various kinds of fruit. They can go as a cluster, as a sort of organisation of producers, to bargain and negotiate and find out what the market wants, and then they present themselves as a one-stop shop supplier.

The last point, which I think is the most important, is that, in general, public standards for safety and quality are of very minimum importance. They're basically a threshold. I'll tell you what a Uruguayan meat exporter, the main such exporter in Uruguay and Paraguay, told us at a conference. She said, "When I went to export to Europe, I realised that the first of ten steps was understanding what the legal regulations are, and what are the public standards for trade. Then the additional nine steps were meeting the private standards of quality and safety of the various chains, which end up being far more important and dominant and require a lot of specialised customised competitiveness. Not general competitiveness, but the ability to adapt and be flexible". I said, a little bit glibly, that the Chileans always say "Yes", but the yes is not just about price because they often get a good price or even a better price. Their "Yes" is if you say, "We would like the residue of such and such a pesticide to be such and such". The Chileans don't respond, as sometimes my American colleagues do, by saying, "Well that's not what we require, that's not what is in the law". They say, "That's fine. I have another phone call here; I'll get back to you". And so the answer is: "What is your specific requirement?", listen to it, and say, "I can even do it one step better for you, to beat the competition". Flexibility, ear to the ground, presence, direct relationships and, above all, the client mentality, I think are the winning combination.

**Q.** *Sally Smith, from the University of Adelaide, and representing the World Vegetable Centre. I'm convinced that supermarkets are reducing waste and modernising supply chains, but I am concerned that the small and really poor farmers are missing out on this. And there seem to me to be parallels between the dairy industry of Australia and these small farmers, in that they have no collective bargaining power. They've missed out. And I like to hear comment from either of you, perhaps Professor Reardon first of all, about what needs to be done for them.*

**A.** (Thomas Reardon) This is the only reason that I'm in this profession: I'm concerned about what can we do to position small farmers in the midst of this transformation. I think the first thing to do, which seems like a strange answer, is to realise that the transformation is taking place and is probably inevitable.

That the market is changing then becomes an exogenous factor that has to be dealt with. Secondly, I think that what happens very often in government Development and Assistance Programs is that a quick solution is grabbed and then applied, but without really understanding the details of the market. If the policy-maker or the development-assistance person is not market savvy — perhaps they don't like the market and they don't think it should be like it is, but they're not being realistic— then the solution actually ends up failing. The most spectacular case I've ever seen of that was in Brazil. One of the best development-assistance agencies in the world realised in the 1990's that there was an extremely rapid concentration of the dairy sector in Brazil. Of course, it was helping consumers, because the price of milk went down by a factor of ten in fifteen years. But there was rapid concentration, and so the agency rushed into the scene and passed out thousands and thousands of milk tanks, and organised cooperatives. Within four years, 61,000 small farmers went out of business, many of them from being part of these programs. The question was, "Why?". It was because coordination costs, and really training the farmers to be able to make flexible investments to keep adapting to the changing dairy industry, were not in the minds of the policy-makers. For them it was basically just a quick fix of cooperatives plus tanks. So, I think that it's very important to pass out assets to help to organise farmers, but at the same time to really understand the needs of the markets and help the farmers meet threshold investments that are necessary to stay in that market over time.

Now the third point is that in many countries in which I'm dealing, for example in India, the public support system for farmers is bad. In other words, even in cases where there are massive amounts of subsidies going in, our studies have shown that actually they are very focused on the medium farmers and the larger farmers. Those farmers are getting 80–90% of the help. So being able to have development assistance and policy dialogue that broadens the scope and the coverage of public programs and rural education and all the other important things, as well as making markets work for the poor, by making the poor able to understand and adapt to the markets, are crucial elements. I really appreciate your concern and your specific question about that.

**A.** (Allan Fels) I think the only thing that has generally worked well to protect growers over the years — and I mean it hasn't worked that well — the only effective remedy is setting a minimum price. Unfortunately, that has other harmful effects, and it encourages inefficiency, and it wouldn't work with vegetables anyway. Another way is to somehow restrict entry, but again that's really not a very acceptable solution. So I see any policy approach as pretty marginal in this matter. I do think, however, that in all areas of agriculture there are always marginal struggling producers, and no matter what price is set, high or low, there'll always be a number of people having a really difficult struggle on the fringe. When the prices have been higher, there has always been another group of even more inefficient producers right on the edge struggling. Price comes down, and another new set of people become marginal, and some can and some can't adapt. In the end, however, I think we should remember that production is done for the benefit of the public, for the benefit of consumers. So

in the end, businesses and farmers are there to serve a consumer need — and that is their justification. That is a tough message, but it is a basic fact of life in our economy.

**A.** (Stephen Mbithi) I want to make a small contribution to the whole issue of smallholders and market participation, especially from a developing-country point of view, based on what we've been experiencing in Kenya. As you know, we have smallholder producers, 1.5 million of them, accessing some of the most difficult markets across the world, with obviously huge problems. How do we do it? How do we deal with this? One way we have been doing it is that we know what our markets want because they tell us what they want. They want assurance that the standards have been met and they want farmers who understand what needs to be done to meet the requirements of the value chain of the markets. So we concentrate on making sure that we train the farmers to meet those standards. We explain to them, clearly, what they must do to realise and meet the standard, but we leave the farmers to make business contacts with the supermarkets in the normal business way. Obviously, we also lobby to make it more pleasant and acceptable to trade with smallholders. We seek to help smallholders in such a way that we can lower the cost of production for their markets or other players. Ultimately, we leave it to the supermarkets and the smallholder groups to trade. So, we take the common aspects of what they need to do — such as standards and information about the market — and promote them, but we leave it to the farmers to interact with the supermarkets. That's what we have been doing.

**A.** (Thomas Reardon) I really appreciate that intervention. I just wanted to add one thing that is actually an addition to my response about export. It relates to something that John Glover mentioned yesterday. A very important point is that one thing that a cooperative or a collection of producers, or even a collection of cooperatives, can do is to try to gain scale in defending a brand. This is something that I've heard in the Asia Pacific region, when listening to various retailers, including METRO. In New Zealand, Zespri and ENZA have a very strong presence in the supermarkets because they have a very well defended, and defensible, brand. On the other hand, I think that in the Australian case, at least in fresh produce for example, there are less recognised brands, and perhaps less of a critical mass of volume and presence behind particular brands for them to be really well defended. As a result, you slip down a very slippery slope called the 'commodity slope', where a penny here, a penny there, counts; where the wholesalers rule the roost and they move easily and fast between different countries, easily eliminating the Australians at a glance. So finding, defending, and selling brands has become very important. Twenty years ago, fifteen years ago, ten years ago, this was not important in the Asia Pacific area. Now, the supermarkets that I interview constantly in the area are crazy about brands. This is extremely important for the consumer. Even in dairy in India, AMUL, which was a collection of cooperatives, had about ten different brands. They found that they were falling out of the competition, even early on, in supermarkets in India. So they converged and created an umbrella brand that then became very powerful in the market. I've seen this in a bunch of other

situations as well. So, brand, brand, brand, is extremely important to make this entry. The cooperatives can help to organise that and make it coherent and less confusing, and then market that brand when identified.

**A.** (Allan Fels) Just briefly, one point I would have made if I had more time. Yes, let there be direct dealings, but the more alternatives that a farmer has to sell to, the better. From that angle, I think it is worth looking at ways that alternative outlets, particular wholesalers that are alternatives to the big supermarkets, should be available. That was touched on in Professor Reardon's speech. I can think of places like India where the government could adopt sensible industry policy to build up and strengthen some of the alternative markets that farmers can sell into.

*This completed the Q and A session at the Tuesday breakfast.  
The conference closed shortly afterwards, following closing remarks  
from Dr Denis Blight AO, Executive Director of the Crawford Fund.*

# Delegates to the 2011 conference

## Agricultural Student Scholarships to 2011 conference

Delegates to the 2011 conference are listed below, with their organisations. Among the names are those of 12 young Australian agricultural scientists (asterisked) whose travel and attendance were sponsored by the Crawford Fund. This initiative supports the Fund's aim of increasing young Australian agricultural scientists' involvement in international agricultural development.

ADDISON, Jane	The University of Queensland
*ALAMGIR, Md	The University of Adelaide
ALLAN, Belinda	Fonterra
*ANDERSON, Jay	Queensland Dept of Employment, Economic Development & Innovation; and The University of Queensland
ANDERSON, John	The Crawford Fund
ANDREW AO, Neil	The Crawford Fund
ANDREWS MP, Kevin	Shadow Minister for Families, Housing & Human Services
ANGUS, John	CSIRO Plant Industry
ASLAM, Naveed	Charles Sturt University, Wagga Wagga
ATKINSON, Sallyanne	The Crawford Fund
AUSTIN, Nick	ACIAR
BAGNARA, Alexandra	ACIAR
BARCLAY, Adam	Green Ink
BARLOW, Snow	The University of Melbourne
BAXTER, Les	ACIAR
BEATTIE, Andrew	University of Western Sydney
BELLOTTI, Bill	University of Western Sydney
BILLSON MP, Bruce	Shadow Minister for Small Business, Deregulation, Competition Policy & Sustainable Cities
BISHOP MP, Bronwyn	Federal Member for McKellar
BLIGHT AO, Denis	The Crawford Fund
BLIGHT, Sharon	
BOWEN, Phil	Asian Development Bank
BOYCE, Sue	Senator for Queensland
BRANAGH, Melissa	Coretext Publications
BROCK, Melanie	Meat & Livestock Australia
BROWN, Alan	The Crawford Fund
BRYANT, Tim	Department of the Senate
BUCKLE, Ken	The University of New South Wales
BURNS, Craig	Rural Industries Research & Development Corp.
BUSH, Russell	The University of Sydney
CAMERON, Adrian	
*CAMPBELL, Sebastian	The University of Sydney
CAMPILAN, Dindo	CIP (International Potato Center)
*CHAMHURI, Norshamliza	Curtin University
CHILVER, Alwyn	AusAID
CHRISTOE, Sophia	The Australian National University
CLEMENTS, Bob	
COATH, Emma	Victoria Department of Primary Industries
COFFEY, Shaun	Industrial Research Ltd, New Zealand
COLBECK, Richard	Senator for Tasmania
CORCORAN, Bridget	The Australian National University
COUGHLAN, Kep	The Crawford Fund

Delegates to the 2011 conference

*COX, Felicity	Charles Sturt University
CRASWELL, Alison	
CRASWELL, Eric	The Crawford Fund
CRAWFORD, John	The University of Sydney
CRAWFORD, Scarlett	The University of Sydney
CRIBB, Julian	Julian Cribb & Associates
DA COSTA-REIDEL, Clara	The University of Sydney
DALY, Joanne	CSIRO
DANEEL, Genevieve	The University of Sydney
DAVIDSON, Dianne	ATSE Fellow
DEHEINZELIN, Audrey	The University of Sydney
DENG, Lisa	The University of Sydney
DENNETT, Angela	The University of Sydney
DIXON, John	ACIAR
DORNOM, Helen	Dairy Australia
DOUBELL, Anna	
DREW, Mark	
DUBS, Andreas	APIA
DUNFORD, Elizabeth	The University of Sydney
DYER, Rodd	ACIAR
EDESON, Gregor	Tasmania Dept of Economic Development, Tourism & the Arts
EDWARDS, Jon	ActionAid Australia
EGGLESTON, Alan	Senator for Western Australia
EMERSON MP, Craig	Acting Minister for Foreign Affairs, and Minister for Trade
ENGLISH, Francis	Dept of Agriculture, Fisheries and Forestry
ENRIGHT, Terry	The Crawford Fund
ETHERINGTON, Dan	Kokonut Pacific Pty Ltd
ETHERINGTON, Richard	Kokonut Pacific Pty Ltd
FALVEY, Lindsay	Hassad Australia
FALVEY, Simone	Hassad Australia
FAWCETT, David	Office of Senator David Fawcett
FELS, Allan	Australia & New Zealand School of Government
FISCHER, Tony	The Crawford Fund
FITZPATRICK, Lesley	Australian Rural Leadership Foundation
FORD, Alison	Austraining International
FOX, Paul	ACIAR
FRY, Jeanette	
GARDNER, Anne	Dept of Agriculture, Fisheries and Forestry
GARNETT, Helen	The Crawford Fund
GASH MP, Joanna	Federal Member for Gilmore
GLOVER, John	METRO Cash and Carry Asia
GODFREY, Sosheel	Charles Sturt University
GOLDIE, Jenny	Sustainable Population Australia
GOODALL, Kira	Dairy Australia
GOSLING, Luke	Office of Senator Crossin
GOULD, Simon	Outcomes Australia
GOYEN, Anna	The University of Sydney
GRANT, Richard	The Australian Senate
GRAY, Doug	ACIAR
GREGSON, Tony	The Crawford Fund
GYLES, Mandy	ACIAR

## Delegates to the 2011 conference

HAASE MP, Barry	Office of Barry Haase MP, Member for Durack
HADLER, Robert	Coles Group
HARRIS, Lynn	Country Women's Association
HARTLEY, Margaret	The Crawford Fund
HARVEY, John	Grains Research & Development Corporation
HARWOOD, Richard	The University of Sydney
HAY, Stuart	Photographer
HAYES, Ted	The Crawford Fund
HAYWARD, Benjamin	The University of Sydney
HEALY, Tim	The Crawford Fund
HEARN, Simon	ACIAR
HEFFERNAN, Bill	Senator for New South Wales
HERRO, Jasmin	The University of Sydney
HERRON, Christina	
HEWITT, Joanna	ACIAR
HICKEY, Georgina	ACIAR
HICKS, Joanna	ACIAR
HILLIAM, Keshia	ACIAR
HIRONS, Benjamin	AusAID
HO, Gabrielle	The Australian National University
HODGSON, Richard	Illumina Inc. Asia Pacific
HOLFORD, Paul	University of Western Sydney
HOMIK, Krystyna	Office of Senator Sue Boyce
HORNE, Peter	ACIAR
HUANG, Stephen	Dept of Foreign Affairs and Trade
INGRAM, Jim	Former Head, UN World Food Program
JACKSON, Norton	Energy Exploration
JACKSON, Pat	
JACKSON, Phil	The Crawford Fund
JANG, Ho Jun	The University of Sydney
JEHNE, Claus	
*JENKIN, Dominic	
JENKIN, Susan	Ironbark Citrus Pty Ltd
JOANNIDES, Christine	Rural Industries Research & Development Corporation
JOHNSON, Molly	The Australian National University
JOYCE, Barnaby	Leader of the Nationals in the Senate
JUPP, Amanda	Enterprise Challenge Fund / Coffey International Development
KARIM, Hasmiida	University of New England/ACIAR
KEERTHISINGHE, Gamini	ACIAR
KELLEHER AO FTSE, Graeme	Graeme Kelleher & Associates
KELLY AM MP, Mike	Parliamentary Secretary for Agriculture, Fisheries & Forestry
KENNEALLY, Kerry	The Crawford Fund
KERIN AM, John	The Crawford Fund
KERSHAVV, Ian	AusAID
KHARIS, Ruth	University of Canberra
KILBORN, Helen	ACIAR
KINNANE, Reece	Oxfam Australia
*KNIGHT, Noel	University of Southern Queensland
KURODA, Haruhiko	Asian Development Bank
LAFFAN, Judith	Dept of Foreign Affairs & Trade
LAGUDAH, Evans	CSIRO Plant Industry

Delegates to the 2011 conference

LAUGHLIN, Helen	The Crawford Fund
LAWN, Bob	James Cook University
LAWRENCE, Janet	The Crawford Fund
LE, Ngoc Lan	The Australian National University
LEAHY, Michael	Baiada Poultry
*LEDDIN, Anthony	Valley Seeds
LEHMANN, Paul	AusAID
LEMERLE, Caroline	ACIAR
LIVERMORE, Jonathan	The University of Sydney
LLOYD, Bruce	The Crawford Fund
LOCKE, Sarina	ABC Rural
LOGAN, Vince	Grains Research & Development Corporation
LOVELL, Richard	Charoen Pokphand Foods
LOVETT, Anwen	Rural Industries Research & Development Corporation
LOVETT, John	The Crawford Fund
LUONG, Linh	Dept of Foreign Affairs & Trade
MACDONALD, Ben	CSIRO Land & Water
MACDONALD, Ian	Shadow Parliamentary Secretary for Northern & Remote Australia
MACKINNON, Ian	The Crawford Fund
MANN, Julia	Austraining International
MARA, Chris	Coles Group
MAYBERRY, Dianne	The University of Queensland
MBITHI, Stephen	Fresh Produce Exporters Association of Kenya
McCARTHY, John	The Crawford School
McCOMB, Arthur	Murdoch University
McCOMB, Jen	The Crawford Fund
McCORMACK MP, Michael	Office of Michael McCormack MP, Federal Member for Riverina
McELHONE, Charles	National Farmers' Federation
McGILL, Albert	Future for Food
McGOWAN AO, Cathy	Australian Women in Agriculture
McKENZIE, Bridget	Senator for Victoria; Nationals for Regional Victoria
McKENZIE, Fiona	The University of Sydney
McKINNA, David	McKinna et al Strategic Insight Global Outlook
MENDHAM, Neville	The Crawford Fund
MILLIGAN, Ann	The Crawford Fund
MILNE, Christine	Office of Senator Christine Milne
MONJARDINO, Marta	CSIRO
NEILSON, Jeff	The University of Sydney
NELSON, Sam	National Farmers' Federation
NESHAM, Matt	Office of Senator Anne Urquhart
NICHOLAS, Tom	Healthy Soils Australia
NINNES, Peter	International Crops Research Institute for the Semi-Arid Tropics (ICRISAT)
NOBLE, Andrew	ACIAR
NYAMEKYE, Pakwasi	AusAID
O'CONNELL, Conall	Secretary, Dept of Agriculture, Fisheries & Forestry
OLIVIER, Sharron	Applied Horticultural Research
PAGE, Warren	ACIAR
PATIL, Raj	Dept of Agriculture, Fisheries & Forestry
PATRICK, Ian	The Institute for Rural Futures, University of New England

## Delegates to the 2011 conference

PAUL, Tania	The Crawford Fund
PEARSON, Lee	The Australian National University
PENGELLY, Bruce	CSIRO
PERRETT, Keith	Grains Research & Development Corporation
PERSLEY, Gabrielle	Doyle Foundation
PETER, Rufina	Papua New Guinea Women in Agriculture
PRICKETT, Kirby	Marsden Jacob Associates
PROCTOR, Elizabeth	The Australian National University
PROCTOR, Murray	AusAID
QUICKE, Audrey	The University of Sydney
QUON, Ann	Asian Development Bank
RADCLIFFE, John	The Crawford Fund
RAMSEY MP, Rowan	Federal Member for Grey
READE, Cathy	The Crawford Fund
REARDON, Thomas	Michigan State University
REID, Holly	ACIAR
REID, Tracy	Dept of Foreign Affairs & Trade
REID AO, Margaret	The Crawford Fund
RITMAN, Kim	Dept of Agriculture, Fisheries & Forestry
ROBB AO MP, Andrew	Shadow Minister for Finance, Deregulation & Debt Reduction
ROBERT MP, Stuart	Shadow Minister for Defence Science, Technology & Personnel
ROBERTS, Megan	Fenner School, ANU
ROGERS, Gordon	The University of Sydney
ROVIRA, Albert	The Crawford Fund
RYAN, Jim	
RYAN, Michael	Dept of Agriculture, Fisheries & Forestry
SAISU, Tomoyuki	Asian Development Bank
SARINI, Putu	University of New England/ACIAR
SATYEN, Dave	The University of Sydney
SAYERS, Keith	ALP International Affairs Policy Committee
*SCANDRETT, Joshua	University of Tasmania
*SCHNEEBELI, Kathy	The Australian National University
SCOTT-ORR PSM, Helen	The Crawford Fund
SECKER MP, Patrick	Federal Member for Barker
SHAFIULLAH, Sahibzada	Charles Sturt University
SHANNON, Robin	
SHEARER, David	ACIAR
SHUTE-TREMBATH, Sally	Asian Development Bank
SIEPER, Kate	Office of The Hon Kevin Rudd
SIEWERT, Rachel	Office of Rachel Siewert
SIMONDS, Anna	Dept of Agriculture, Fisheries & Forestry
SIMPSON, Robert	The University of Sydney
SINN, Michelle	Queensland Dept of Employment, Economic Development & Innovation
SJOLANDER, Mark	Office of The Hon Dr Mike Kelly AM MP
SLACK-SMITH, Dick	The Crawford Fund
SMIDER, Benjamin	The University of Sydney
SMITH, Jack	
SMITH, Matthew	The Australian National University
SMITH, Sally	World Vegetable Centre
SMYTH MP, Laura	Federal Member for La Trobe

Delegates to the 2011 conference

STANDEN, Bruce	The Crawford Fund
STAPPER, Maarten	BioLogic AgFood
STIRZAKER, Richard	CSIRO Land & Water
STONE MP, Sharman	Federal Member for Murray
SUBANDIYAH, Siti	Universitas Gadjah, Indonesia
SUENAGA, Haruna	The University of Sydney
SURYADARMA, Daniel	Arndt-Corden Department of Economics, ANU
TANNER, Jon	New Zealand Institute of International Affairs
TEHAN MP, Dan	Member for Wannon
TEMPLETON, Deborah	ACIAR
TENNENT, Rebeka	The Australian National University
*THOMPSON, Hannah	University of Tasmania
THOMPSON, Lyndal	The Australian National University
THOMPSON, Rhys	The University of Sydney
THOMSON, Vivien	Dept of Agriculture, Fisheries & Forestry
THOMSON MP, Craig	Office of Craig Thomson MP
THORNTON, Lukar	Deakin University
TULIP, Robert	AusAID
UMBERGER, Wendy	The University of Adelaide
*VAGHEFI, Niloofer	The University of Melbourne
VAN SON, Nguyen	Crawford School, ANU
VERRIER, June	
VICOL, Mark	Dept of Agriculture, Fisheries & Forestry
VOS, Amy	The Australian National University
VOUTIER, Paul	B4MD (Business for Millennium Development)
WALL, Catherine	McKinna et al Strategic Insight Global Outlook
WARDROP, Caroline	Dept of Agriculture, Fisheries & Forestry
WATSON, Laura	CSIRO Plant Industry
WAUGH, David	Parmalat Australia Ltd
WEBB, Richard	Dept of Agriculture, Fisheries & Forestry
WEBER, Xenia	The Australian National University
WEGENER, Malcolm	The University of Queensland
WEST, Elspeth	Dept of Agriculture, Fisheries & Forestry
WHITE, Albert	
WHITTOCK, Damon	Rural Industries Research & Development Corporation
WHITTON, Anna	The Australian National University
WIBER, Alex	Grains Research & Development Corporation
WICKES, Roger	The Crawford Fund
WINDSOR, Peter	Faculty of Veterinary Science, The University of Sydney
WINTER, Simon	Rural Industries Research & Development Corporation
WITTMANN, Katharina	The University of Sydney
WOODS, Beth	Queensland Dept of Employment, Economic Development & Innovation
WRAY, Mark	Craig Martyn Group
WRIGHT, Lisa	AusAID
WYATT MP, Ken	Federal Member for Hasluck
WYNN, Peter	E.H. Graham Centre for Agricultural Innovation, Charles Sturt University
ZHENG, Leo	The University of Sydney
ZHUKOV, Eugene	Asian Development Bank

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