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**ASIAN FOOD MARKET TRANSFORMATION:
POLICY CHALLENGES TO PROMOTE
“COMPETITIVENESS WITH INCLUSIVENESS”**

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Asian Food Market Transformation: Policy Challenges to promote “Competitiveness with Inclusiveness”

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1. Introduction

Asian food markets are transforming profoundly and extremely rapidly. This transformation has implications in terms of value-added and primary production employment for small-scale processors, intermediaries, and farmers, and landless laborers. The implications include new opportunities for poverty alleviation and income growth through broader and deeper markets, and markets that allow quality differentiation and more value-added. Those opportunities are accompanied by challenges to small-scale actors because in general the market transformation brings greater competition, greater demands for increasing quality and safety and reducing costs, increasing volumes and consistency, and modernizing post-harvest handling and commercial practices. These challenges translate into “threshold investments” by those actors – in equipment, skills, land improvements, knowledge – that can prove daunting to the asset-poor. Policies and public investments have an important role in helping producers over those hurdles in order to benefit from rapid market transformation.

Markets transformation can be analyzed in terms of changes of the characteristics of the exchange itself – such as its location and volume – and the demand and supply sides of the exchange. The demand side can be analyzed in terms of food consumption levels and composition, with the latter broken down into food obtained from home-production versus the market, and into types of food bought in the market – processed vs raw, staples versus non-staples. The supply side can be analyzed in terms of the supply chain from the farmer to the last point (usually retail) before reaching the final-demand point. That supply chain is composed of retailers, processors, wholesalers, farmers, and input supply firms. Thus, analysis of market transformation is a complex and vast terrain – in particular in Asia where all these elements are changing simultaneously and quickly!

Here we concentrate basically on two key trends, which we feel are the triggers for change in Asian food markets, and therefore associated implications for small holders, policies and investments. The first trend is the fast diversification of diets towards high value agricultural products such as fruits and vegetables, milk, meat, and fish, etc. and the second trend is the rapid rise of organized retail in food, which we call “supermarket revolution”. Moreover, these two trends have some causes in common and reinforce each other, a point we explore further below.

2. Diversifying diets into Non-Staples/High-value Food Products:

There are three key points.

First, following the Bennett's Law, the share of non-staples rose quickly in diets across developing-Asia. During 1991-2005, the consumption patterns in 8 major countries of south and south-east Asia (Bangladesh, India and Pakistan from south Asia, and China, Indonesia, Philippines, Thailand and Vietnam from south-east) showed that average annual consumption of meat went up by 3.9%, vegetables by 3.7%, eggs by 3.1%, milk by 2.7%, fish by 2.4%, and fruits by 1.9%, while the consumption of grains went down by -0.4% (Figure 1). The biggest changes were in China, which experienced the fastest rate of overall per capita GDP growth in the region during this period.

Second, the Bennett's Law effect noted above is not only to reinforce and expand along the same diet-composition lines of the traditional Asian diet – but instead to shift that composition “westward” into non-traditional products that together spell a “westernization” of the Asian middle class diet toward wheat, temperate fruits and vegetables, and high protein foods like dairy and meat (Pingali 2007). A stunning example of this is the spectacular increase in the production of milk (a very non-traditional food there) from 1.14 million tons in 1980 to 27.5 million tons in 2005, a 24-fold increase over 25 years; urban milk consumption leapt from 8 kgs/capita in 1996 to 25 in 2005 – nearing the 35 kg/capita of India, a traditional consumer of dairy products (Hu, Fuller, and Reardon 2007).

Third, while quantity and food price still reign supreme for the average Asian consumer, there is a trend toward emerging quality and food safety differentiation in the food market. We expect this to grow significantly in the coming decades. Income growth and greater vertical coordination in supply chains have created demand as well as capacity and reward for quality differentiation, especially to the middle class consumer segment and via supermarkets and HORECA (hotel, restaurant and catering). Moreover, there have been various crises of food adulteration (such as fish in Indonesia), avian flu, SARS and other food-borne illnesses, and pesticide poisonings, that have pushed urban consumers toward beginning to be food-safety conscious.

3. Emergence of “Supermarket revolution”:

While the growth of wholesale markets and the growth and consolidation of the food processing industry have been very important trends in Asian food markets in the 1980s and into the 1990s (see for example Bhavani, et.al. 2006 for the Indian food processing case, and Natawidjaja et al. 2007 for evidence of transformation of the produce wholesale sector in Indonesia), the most striking recent market structure change that has occurred in south-east Asia in the early/mid 1990s, China in the mid/late 1990s, has been the emergence of a “supermarket revolution” (Reardon and Timmer, 2007), which is currently spreading to south Asia, notably India.

The spread of supermarkets has and is taking place in three established waves, and a fourth emerging wave. (1) The “first wave” countries experienced supermarket-sector “takeoff” in the early to mid 1990s. These include much of East Asia outside China (and Japan). In these countries, the average share of supermarkets in food retail went from roughly only 10-20% circa 1990 to 50-60% on average by the early 2000s (Reardon and Timmer 2007). Compare that to the roughly 75-80% share that supermarkets have in food retail by 2005 in the US and Western Europe, and one sees a process of convergence. These first wave countries saw supermarket diffusion in a single decade that took some five decades in the U.S. and the U.K. (2) The second-wave countries

include much of Southeast Asia. In these areas, the share went from circa 5-10% in 1990 to 30-50% by the early 2000s, with the take-off occurring in the mid to late 1990s. (3) The third-wave countries include countries where the supermarket revolution take-off started only in the late 1990s or early 2000s, reaching about 1-15% of national food retail by today. These areas include “transition East Asia” (China and Vietnam) and India.

During 2000-2006, top ten grocery retailers in six selected countries of south and south-east Asia registered average annual growth rates ranging from 65.5% in Vietnam to 28% in Indonesia. (Figure-2).

There were and are also waves of diffusion of supermarkets over space within an Asian country, over consumer segments, and over product categories. (1) Supermarkets tend to start in large cities, and then spread to intermediate cities and towns, and then to small towns in rural areas. The business strategy is the same as chains have in spreading in waves over countries: the richest and largest market is entered first due to highest profit per capital invested; competition and saturation of the initial base drives investment by a given chain into the series of subsequent markets. (2) Controlling for the pattern of spatial diffusion, there are similar waves of diffusion over socioeconomic groups cum consumer segments. Obeying the same business logic as in spatial diffusion, supermarkets focus first on upper income consumer segments (national and expatriate), and then move into the middle class, and finally into the markets of the urban poor. (3) Moreover, as modern retail spreads, there tends to be format diversification to facilitate the spatial and consumer segment differentiation. For example, to penetrate the markets of inner cities and small towns where space is limited and product assortment can be more narrow, chains use discount stores, convenience and neighborhood stores, and small supermarkets. (4) Product penetration spreads from processed foods (canned, dry, and packaged items such as rice, noodles, and edible oils) to semi-processed foods (with extensive or minimal processing such as dairy products) and minimal processing/packing (chicken, pork, beef, and fruit) to fresh fruits and vegetables.

An example from China and Hong Kong illustrate the penetration of supermarkets – and reinforce the point that the challenges for policies and programs will be earliest in the value-added segment (processed and semi-processed products as noted here). In a new study in the six largest cities in China, from a random sample of 1200 consumers, Goldman and Vanhonacker (2006), show that modern retailers already have a retail market share of 94% in non-food, 79% in packaged/processed goods, 55% in baked goods, 46% in meat, 37% in fresh fruit, 35% in poultry, 33% in fish, but only 22% in fresh vegetables. Compare that to the more advanced case of Hong Kong, which one might say represents the average Asian consumer sometime in the medium-term future; supermarkets have a 59% share in fruit retail, but still only a 55% share in vegetables (hence a share similar to supermarket penetration of produce retail in Brazil), 52% in meat, 39% in poultry, and 33% in fish (Coca-Cola Retailing Research Council Asia 2005).

There are several drivers of the above changes: (1) increasing incomes and urbanization; (2) retail FDI liberalization in the 1990s and 2000s, with competitive domestic retail investments; (3) pro-supermarket policies such as State-supported supermarket chains (such as in China), tax breaks for supermarkets by municipalities, and regulation of wetmarkets (in most countries) or even conversion of wetmarkets to supermarkets (in some Chinese cities); these policies have been to some extent (but not on-balance...) been balanced by policies constraining supermarket

diffusion, such as location and hours rules such as in Thailand and some continued FDI limitations such as in India. (4) Some recent food safety crises have spurred consumers to shift to modern retail and large processors for their food, for example as found by Phan and Reardon (2007) for Vietnam before and after the bird flu outbreaks. (5) Procurement system modernization, especially in processed and semi-processed products, including dry goods, oils, meat, fish, dairy (together 85% of what supermarkets sell), have driven down costs and thus prices and helped supermarket diffusion.

4. Implications for Producers and Policy:

Note that the trends of diet diversification and the supermarket revolution share some common drivers (income growth and urbanization), reinforce each other (as supermarkets build and extend markets for processed and semi-processed products like dairy, processed horticulture products, and meat), and transform each other (as consumers press for quality and safe produce, supermarket chains transform their supply chains for more coordination and traceability).

Supermarkets and large processors tend to source from a combination of wholesale markets, specialized/dedicated wholesalers, and direct from farmers and processors. The impacts on farmers are mainly through effects of supermarket sourcing on processors and processors in turn imposing cost and quality demands on farmers.

Several patterns are emerging empirically (in recent studies) with respect to the kinds of suppliers from which supermarkets source.

(1) Supermarket chains tend to source from medium and large suppliers where they are available; this typically means a tendency toward sourcing from larger meat and dairy products and other processed food companies, as is shown for example in India and Indonesia.

(2) Supermarket chains also tend to source, where possible, fresh products from medium/large farmers; however, this is rarely possible in most developing countries, except for a few products (which vary by country) and other export sectors where large and medium farms have developed in produce.

(3) Most of the time supermarket chains thus source only indirectly, through wholesalers and processors, from small farmers. The latter tend to be the upper stratum of small farmers in terms of capital assets (organization, equipment, and training), infrastructure access, and size (Reardon and Timmer 2007).

(4) Where the small farmers are bereft of the needed assets, but the channel must still rely on them, sometimes the proximate intermediary or even the retailer assists with training, credit, and so on (for example as Carrefour and Metro are presently doing directly from producers in new programs in China).

(5) As most fresh produce growers are small in Asia, small farmers are not excluded on the basis of size of their landholding or land tenure, except when these factors affect the farmers' capacity to implement certain technologies that in turn have an impact on quality, productivity, costs, or the

ability to plant and/or harvest at the needed times during the year. Rather, other assets appear to play a much bigger role than does land. In particular, the included have more education, more access to transport and roads, have greater prior holdings of irrigation, and other physical assets, depending on the product, such as wells, cold chain, greenhouses, and good quality irrigation water (because of contaminants). Natawidjaja et al. (2007) shows this for tomatoes in Indonesia. In the very rare instances where small farmers sell direct to the supermarket, they have a very good rural producers' organization (RPO).

(6) Farmers in the supermarket-channel tend to earn substantially more (from 10% to double) in net terms, so the payoff to making the "threshold investments" is substantial. However, those who sell to the supermarkets tend to be the asset-elite among small farmers. The impact in the early stages of supermarket penetration, on exclusion of asset-poor small farmers should be placed in the context that typically only 10-30% of all the farmers are selling via the modern channels. That number will continue to grow (from being nearly zero only a decade ago), and that will create an increasing market challenge as well as an opportunity for the asset-poor.

The above discussion clearly brings out one thing for policy: that it is the asset-poor (not necessarily the small holder) who may be left out from participating in these supermarket chains. Implication for policy is that small holders need to be focused for "asset building", be it through market information, education, credit disbursement, extension services, etc.

In order to understand better how organized retail can help the small (asset-poor) producers, one has to imagine the process from plate to plough, or retail to tail (farming) (Figure-3) (Gulati and Reardon, 2007). The organized retailers are first interface with the consumers who buy in the organized channels, and they can effectively communicate consumers' preferences back to producers in terms of quantity, quality, and other specific traits, especially food safety, of different commodities. This market information itself is critical for small producers to mitigate their market risk and encourage investments.

The process can be strengthened and expedited if the retailers or their specialized procurement agencies (esp. processors) not only tie up with farmer organizations for their output, but also help them in providing critical inputs such as technical expertise, extension, finance, insurance, etc. which are in general scarce or even missing in the public support systems accessed by the broad mass of farmers. Given the scale at which organized retailers/processors operate, they can bring in the services of banking and even insurance companies in this game by bringing in specialized agencies. This would release not only the credit constraints that most of the farmers, especially small ones, face but also give a cover to their production risks as they move from low value agriculture to high value agriculture. This surge of access to inputs means farmers are empowered to modernize and become more competitive both in the national and the international market. Supplying to supermarkets (or their dedicated processors) can thus be a springboard or (in bicycle) "training wheels" for exports even by small/medium farmers.

Given the size of demand by organized retailers and their processors, it is very difficult for individual farmers, especially small ones, to enter into any agreement or contracts with these retailers. That is where a challenge lies in clustering farmers in groups of viable size to match their supplies with the type and size of demand by the organized retailers.

It could be done through farmer cooperatives, duly supported by the governments, as was done in India under “Operation Flood” for dairy farmers, and today the retail network of Mother dairy in India procures milk from these farmer cooperatives. It could also be done through farmer floated companies or through civil society organizations.

Since organized retailers have largely (85% or so) processed and semi-processed food, major linkages with farmers are likely to emerge through large processors. Nestle in India, e.g., is procuring milk through more than 85,000 farmers, majority of whom are mid to small. Similarly, corporate house like ITC in India is linked to 3.5 million farmers for its procurement of soya, wheat etc. through its e-choupal network, and majority of these farmers too are middle to small. The upshot is that the backward integration of these organized retailers/processors can take several forms, directly through farmers’ organizations, or through “lead” farmers, who act as collectors at the village level, or through specialized and supported procurement agents, or through processors. But all this happens when the front end of organized retail is big enough to necessitate large procurement and thus pay for the price premiums that reward consistency and quality differentiation. Once they reach a critical level of say 20-30% of the total retail, their impact on modernizing the wholesale markets, logistics, and in providing necessary inputs to farmers, etc. would start becoming visible. The governments, business associations, and civil society organizations may have to work together in a way that this opportunity is not lost but used in a manner that benefits majority of stakeholders in this chain from retail to tail.

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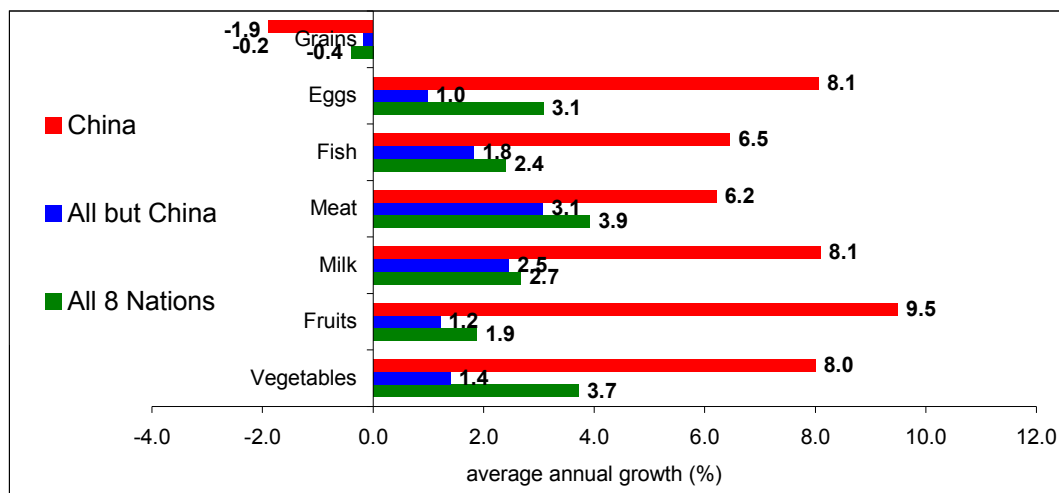
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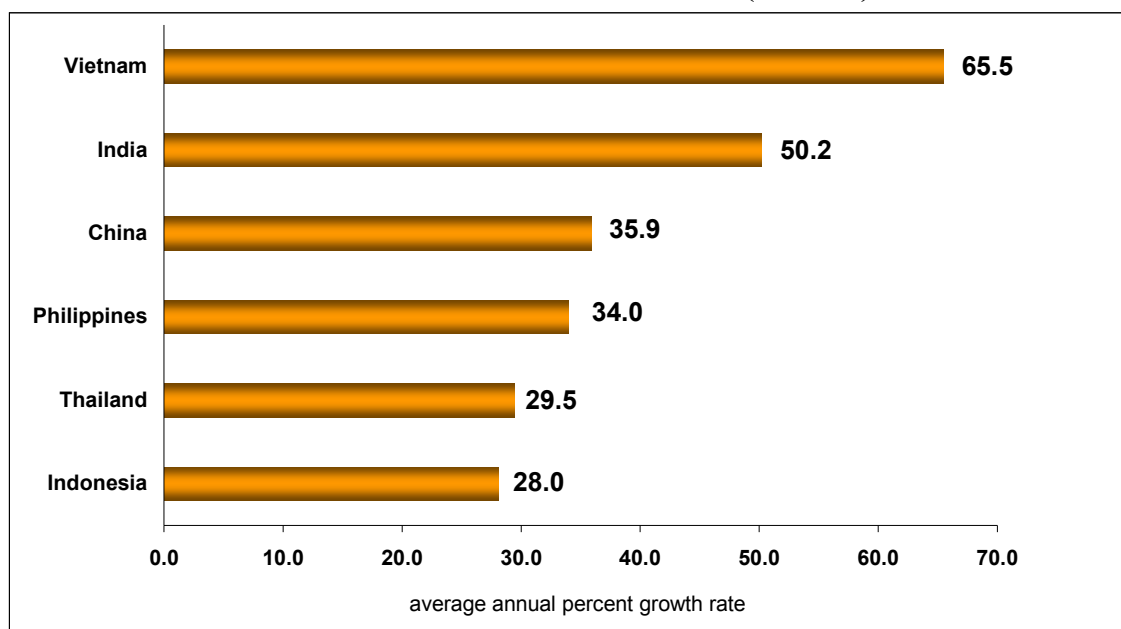
Figure-1: Average Annual Growth in per capita consumption (1991-2005) in Selected 8 Countries in South and South East Asia



Notes: Grains include cereals and pulses, Consumption measured as grams/capita/day, the 8 countries include Bangladesh, China, India, Indonesia, Pakistan, Philippines, Thailand and Viet Nam.

Source: FAOSTAT, © FAO Statistics Division 2007, 30 July 2007

Figure 2: Average Annual Growth Rate in Grocery Sales of Top 10 Retailers in Selected 6 Countries in South and South East Asia (2000-06)



Notes: Grocery sales include food, beverages, tobacco products, drugstore items and small everyday non-foods household goods. The Top 10 retailers' (in the grocery segment) ranking is based on the grocery banner retail sales in 2006.

Source: Planet Retail website, Access Date 31st July 2007

Figure-3: Backward Coordination: *from retail to tail* (farmers)

