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CITIES AS AGRICULTURAL MARKETS*

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ABSTRACT. *This article examines the role of cities as agricultural markets in developing countries. Topics include urban-rural linkages, distribution systems, and private or government participation. Recommendations are made to strengthen the informal sector by providing credit to expand operations so that reliable, inexpensive supplies of foodstuffs are available in urban areas. A research agenda is suggested.*

LARGE cities are almost taken for granted as markets for agricultural goods in developing countries. Yet distribution, preparation, and sale of food in cities involve large numbers of workers in large and small enterprises and in informal-sector activities. Large portions of both the investment and the employment in this sector in third-world cities are related to preparation, distribution, and sale of food. Moreover, there are strong linkages between formal and informal enterprises involved with marketing of food in urban areas. Large cities and metropolitan areas are the final markets for many agricultural products of rural regions with commercial farming and the sources for many manufactured goods.¹ These roles are likely to become even more important with continued urban population growth. The urban population in developing countries is projected to expand by 4 percent a year during the next decade and a half, while the number of cities with a population of one million or more is expected to double from the 118 that existed in 1980 to 284 by the end of the twentieth century. The population of these cities will increase by at least 600 million, and more than one-half of the households at or near subsistent levels in developing countries will be urban.²

The effects of urban population expansion on agriculture and on both rural and urban economies will be pervasive.³ Large numbers of poor urban families will have to be fed and employed during the next two decades. To meet the needs of expanding cities for food and employment, significant investments will be required for urban food-marketing facilities and for transportation equipment, highways, and roads. Small-scale informal-sector

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¹ Dennis A. Rondinelli, *Secondary Cities in Developing Countries: Policies for Diffusing Innovation* (Beverly Hills, Cal.: Sage Publications, 1983); Dennis A. Rondinelli, *Towns and Small Cities in Developing Countries*, *Geographical Review* 73 (1983): 379-395.

² *Patterns of Urban and Rural Population Growth* (New York: United Nations Department of International Economic and Social Affairs); *Shelter: Poverty and Basic Needs* (Washington, D.C.: World Bank, 1980).

³ Dennis A. Rondinelli, *Cities and Agricultural Development: The Urban-Rural Connection*, *Regional Development Dialogue* 5 (1984): 1-18; Dennis A. Rondinelli, *The Urban Transition and Agricultural Development: Implications for International Assistance Policy*, *Development and Change* 17 (1986): 231-263.

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enterprises for food marketing will need financial and technical assistance. Investment will also be needed to strengthen the physical and economic linkages between markets in large cities and their agricultural supply areas. The purpose of this article is to examine the role of cities as agricultural markets, the characteristics of urban food-marketing chains, and the nature of linkages between urban markets and their rural supply areas.

A broad concept of marketing is used here. Marketing is usually defined as the set of business activities affecting the flow of goods and services from producer to consumer, but excluding the actual production of the goods.⁴ Marketing includes three groups of functions: exchange, which includes buying, assembling, and selling goods; physical activities such as transporting, storing, and distributing goods; and facilitative, which covers classification and grading of produce, finances, marketing information, and risks.

CITIES AS AGRICULTURAL MARKETS

The most important role of large cities in agricultural development is as the principal markets for foodstuffs and other produce. In many parts of the world, large metropolitan areas are the dominant market for agricultural goods from the accessible countryside. The cities organize the marketing system for both domestically consumed and exported commodities as well as the distributing system for imported foodstuffs. Historically the increased size of cities has led to greater dependence on food imported from distant producing regions. For example, only 24 percent of the population of India lives in urban areas, but more than one-half of the foodgrains distributed by the Indian national food-procurement system goes to five states that contain approximately 60 percent of the urban population in the country.⁵ Studies of rice marketing in Thailand highlight the role of Bangkok as the focal point for all aspects of pricing, bulking, distributing, and exporting foodstuffs in the Central Plains region that surrounds the city.⁶

Cities in developing countries function as important markets for agricultural goods not only because of their sizable populations but also because urban households tend to spend a high proportion of their income on foodstuffs. Although the percentage of household expenditures for foodstuffs tends to decrease with rising level of earnings, groups with low and middle incomes in most developing countries spend, on average, approximately one-half of their income on food.

The range of expenditures depends on income distribution and the level of economic development in any urban region. Studies of expenditures by

⁴ A. P. Gupta, *Marketing of Agricultural Produce in India* (Bombay: Vora and Company, 1975).

⁵ A. Ahmad and A. K. Singh, *Public Food Distribution System in Indian Cities*, *GeoJournal* Supplementary Issue 4 (1982): 27-47.

⁶ Savit Bhotiwihok, *Agricultural Development Sector Study of Rural-Urban Relations in Thailand, in Rural-Urban Relations in the Bangkok Metropolitan Dominance Subregion* (edited by Phisit Pakkasem; Nagoya: United Nations Center for Regional Development, 1978), 1-135.

urban households in Bangladesh indicate that the highest-income groups allocate approximately 56 percent and the poorest households approximately 68 percent to food. Among the latter, almost 90 percent of the households spent more than 80 percent of total income on food, and at least 12 percent of the poor spent more than 90 percent.⁷ In Malaysia low- and middle-income households expended between 42 and 54 percent of their earnings on food.⁸ In the Philippine city of Iloilo, approximately 77 percent of the income of poor households went for food, while the figure was only 66 percent for middle-income groups. Approximately 30 percent of the expenditures purchased prepared food, two-thirds of it from street and vendor stalls.⁹ These patterns indicate that cities in the developing world are likely to remain the principal markets for rural agricultural produce well into the future, especially with continued rapid urban growth during the next two decades.

URBAN FOOD-MARKETING CHAINS

The marketing chains through which foodstuffs and other agricultural goods reach urban regions are complex systems that link three or four levels of producers, intermediaries, wholesalers, retailers, brokers, and distributors and that extend through secondary cities, regional urban centers, market towns, and rural villages. In many developing countries food staples sold in urban markets usually come from immediate hinterlands, but many agricultural products also are imported over long distances. Thus assemblers and wholesalers play an important role in any urban food-marketing system. For example, wholesalers at Dar es Salaam receive produce not only from farmers in the city's hinterland but also from producers in Morogoro, the Coast Region Mbeya, Arusha, and Lushoto.¹⁰ The largest amounts of foodstuffs are bulked at assembly points that are well known to farmers, truckers, middlemen, and small-scale wholesalers. Intermediaries travel among such points until they have enough goods to fill a truck, and they then proceed to Dar es Salaam where the produce is sold at the wholesale department of the Kariakoo market. There wholesalers distribute the food to a limited number of supermarkets and to numerous small specialty shops. The small groceries or dukas are found throughout the city in structures where operators live on the second floor or at the rear. Approximately 60 percent of the foodstuffs in the city is marketed through dukas and shops, while 25 percent is sold by street and market vendors or by the producers themselves. The pattern of acquiring fruits and vegetables for Kuala Lumpur is similar in

⁷ Nazrul Islam, Food Consumption Expenditure Pattern of Urban Households in Bangladesh, *GeoJournal* Supplementary Issue 4 (1982): 7-14.

⁸ T. Lam, Food for the City: The Role of the Informal Sector, *GeoJournal* Supplementary Issue 4 (1982): 49-59.

⁹ Gerald A. Barth, Street Foods: Informal Sector Food Preparation and Marketing (Iloilo, Philippines: Equity Policy Center, 1983).

¹⁰ Anders Sporek, Food Marketing and Urban Growth in Dar es Salaam, *Lund Studies in Geography* No. 51, Royal University of Lund, Lund, Sweden, 1985.

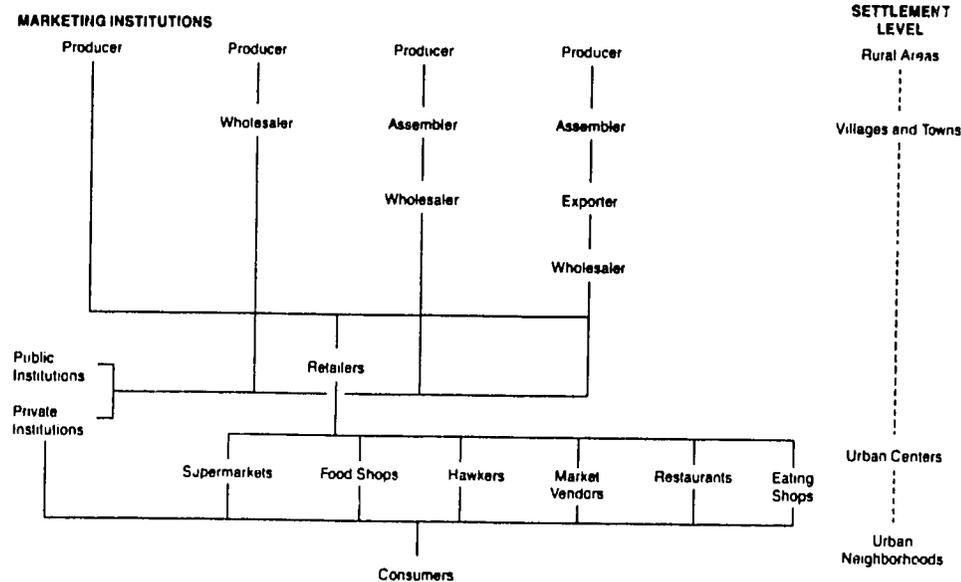


FIG. 1—Food-marketing chains in developing countries.

many respects. Wholesalers in the city obtain produce from rural areas throughout the peninsula. Some fruits come from small-scale gardens or orchards near the city, but the larger amount arrive from distant areas like Jahore, Perak, and Pehang that are as much as 200 kilometers from the city. Truckers and buying agents in the rural areas assemble the produce for shipment by truck to Kuala Lumpur. Temperate-climate vegetables are acquired in highland zones more than 220 kilometers north of the city.¹¹

Wholesalers and assemblers in third-world cities operate bulk-breaking sites that allow small retailers and vendors to obtain sufficient amounts of goods for their customers. Because many cities with large numbers of poor households cannot efficiently support large-scale assembling and warehousing firms, costs of suppliers can be minimized at specialized bulk-breaking sites.¹²

The food-marketing chain in some countries comprises both private and public channels of exchange. The public system for food procurement and distribution in India, for example, is operated by a governmental agency that obtains foodgrains from farmers in rural areas through a network of more than 135 district offices in 19 states.¹³ Foodgrains, purchased in regulated markets and *mandi* centers, are hauled to more than 2,000 agency warehouses,

¹¹ James C. Jackson, *Trader Hierarchies in Third World Distributing Systems: The Case of Fresh Food Supplies in Kuala Lumpur*, in *Food, Shelter and Transport in Southeast Asia and the Pacific* (edited by P. J. Rimmer, D. W. Drakakis-Smith, and T. G. McGee; Canberra: National Australian University, 1978), 33-61.

¹² W. Penn Handwerker, *African Marketing Institutions and Rural Development Policy*, *African Urban Studies* 10 (Spring 1981): 5-20.

¹³ Ahmad and Singh, footnote 5 above.

depots, and storage facilities. The grains are processed by millers in district towns and are distributed to fair-price shops in cities for sale to registered consumers. Foodgrains purchased by large private trading firms follow a similar chain to market: assembly and storage in warehouses and depots at small towns, shipment to large centers for processing, and sale to urban wholesalers for distribution to retailers.

In La Paz, Bolivia, backward linkages from city to rural areas are extensive in foodstuff procurement.¹⁴ Potatoes, yams, maize, carrots, onions, tomatoes, cabbage, and lettuce are brought to La Paz from the Cochabamba valley, which is 300 kilometers distant, from the altiplano around Lake Titicaca, and from small temperate valleys near the city. Farmers in adjacent rural areas often go to La Paz for several days to sell goods directly to consumers. Others, farther from the city, sell to truckers, brokers, and other intermediaries who take the produce to urban markets or to wholesalers. Migrants to La Paz sometimes obtain agricultural produce from their native communities for sale in the city markets.

Farmers living near large Malaysian cities sell their produce directly to retailers or indirectly through wholesalers who in turn distribute it to exporters and retailers. Consumers buy foodstuffs from supermarkets, shops, hawkers, and vendors for household preparation. Supermarkets tend to cater to a small group of wealthy households and offer a wide variety of imported and exotic foodstuffs. Far more produce is marketed through shops that sell rice, sugar, bottled, canned, and preserved foods, beverages, sauces, salt, cooking oils, biscuits, and cereals. For the most part, these shops are family-operated businesses. Hawkers and vendors sell the bulk of fresh meat, fish, vegetables, and fruits from stalls in fixed markets or from house to house with pushcarts, tricycles, bicycles, and motor vans.¹⁵

FOOD-MARKETING SYSTEMS

The structure of urban food-marketing systems is similar throughout the developing world, although the percentage of foodstuffs distributed and sold by each component differs among the countries and cities. The variations result from economic, physical, and social characteristics. Most foodstuffs are sold in third-world cities through central markets, small shops, and street vendors.

The small-enterprise and informal-sector components are essential to the food-marketing systems because of the numbers of people with low incomes. They shape consumer behavior and make most households dependent on small-scale food preparers and distributors. Urban consumers tend to fragment purchases among several establishments or vendors and to shop frequently for foodstuffs, daily and sometimes several times a day, because they

¹⁴ Judith-Marie Buechler, *The Dynamics of the Market in La Paz, Bolivia*, *Urban Anthropology* 7 (1978): 343-359.

¹⁵ Lam, footnote 8 above.

do not have adequate storage for perishable goods. Additionally, each purchase is a relatively small amount of a foodstuff because of limited available money and a preference for fresh products. Consumers buy chiefly from shops and vendors in their immediate neighborhood and patronize the same retailers on a regular basis.¹⁶

For these reasons, food-retailing systems in most urban areas of developing countries comprise fragmented, dispersed marketplaces and large numbers of both small specialized shops and vendors with relatively stable clienteles. These operations have low margins of profit and function primarily with the labor of the owners and their immediate families. Most grocery stores and food shops must be highly accessible in location and business hours, because they sell in small lots and offer little product diversification. Although a rise in household income marks a tendency to shop less frequently for greater diversity of foodstuffs and in larger stores, food marketing and purchasing remain highly segmented.

Marketplaces have an important role in foodstuff distribution in most third-world cities and rural areas. Central and district markets flourish in most urban regions, because they offer consumers fresh products at lower prices than do either neighborhood retailers or street vendors, although the cost of transportation to and from the markets must be added to overall prices. In many large cities, a hierarchy of markets has evolved to serve consumers dispersed throughout the area. For example, neighborhood markets in Monrovia, Liberia, deal almost exclusively with foodstuffs, while central markets have an expanded range of both goods and retailers. These two levels of marketing have adjusted their locations to minimize overlaps in trading areas so that the markets in the city are almost equidistant from each other.¹⁷

Although the role of central markets in large cities is increasingly important in food distribution, many foodstuffs are obtained from hawkers, street food preparers, and small shops. Not only do such small-scale and informal-sector enterprises provide a livelihood for many urban residents, but also they generate employment and income for families at the low end of the socioeconomic spectrum. Both small enterprises and informal-sector food sellers play a crucial role in providing affordable amounts of food to low- and middle-income households. By allowing credit to customers, many informal-sector vendors and small-shop operators encourage a continuing relationship of mutual interdependence.

Small enterprises that provide a livelihood for almost two persons an establishment and employ one worker for every two shops account for approximately one-half of retail food establishments in peninsular Malaysia. The other half are hawkers and vendors. Hawkers are especially important

¹⁶ Arie Goldman, Outreach of Consumers and the Modernization of Urban Food Retailing in Developing Countries, *Journal of Marketing* 38, No. 4 (1974): 8-16.

¹⁷ Handwerker, footnote 12 above, 13.

in maintaining an inexpensive, reliable supply of fresh and cooked foods; their low overhead allows low prices. The small lots that they sell are particularly important to the poor who must obtain food on a day-to-day basis.

Street vendors and preparers of food compose a large portion of the urban food-distribution system in developing countries. For example, approximately 85 percent of all food purchases in Accra, Ghana, are made from street vendors. The city has one street vendor for every thirty-five inhabitants.¹⁸ Consumers in the Philippines can purchase full meals or individual foods from such vendors. In Iloilo, approximately 60 percent of expenditures for prepared food went to vendors and sari-sari stores.¹⁹ Low- and middle-income households in Santiago, Chile, purchase foodstuffs for home preparation from small shops within the residential district.²⁰ Between 72 and 81 percent of total expenditures on foodstuffs of low-income households went to small neighborhood shops. More than 90 percent of the bread and cooking coal, more than 80 percent of the fish and milk, and more than 60 percent of the meat and vegetables were purchased in small amounts at neighborhood shops, which generally had a range of fewer than fifteen products. Shops and vendors in Dar es Salaam had a similarly restricted range of available products: no more than 1 percent offered a range of more than twenty-five items.²¹ Despite the narrow range and limited volume of sales, small shops, market stalls, and street vendors are an important component in the food-marketing chain between rural and urban areas. Street vendors and other informal-sector distributors handle a large proportion of the domestic food supplies, usually purchased locally or regionally.²²

The informal-sector activities in most third-world cities have close linkages with formal-sector firms. Obtaining their offerings from retailers, wholesalers, and other suppliers, hawkers and vendors function as sources of the small amounts of produce purchased daily by households. In Dar es Salaam most market and street vendors obtain their goods from Kariakoo Market Corporation, the government's food procurement and wholesaling center.²³ In the Philippines, many items sold by sari-sari stores come from large groceries and retailers, and street vendors obtain items like soft drinks and beer from wholesalers or bread from bakeries. The primary source of supplies for almost one-half of the small food stores in Santiago is La Vega, the largest wholesale market in the city, although 12 percent of the shop owners obtain produce directly from farmers.²⁴ Additionally many informal-sector activities

¹⁸ Sporrek, footnote 10 above.

¹⁹ Barth, footnote 9 above.

²⁰ Victor E. Tokman, Competition between the Informal and Formal Sectors in Retailing: The Case of Santiago, *World Development* 6, Nos. 9-10 (1978): 1187-1198.

²¹ Sporrek, footnote 10 above.

²² Monique Cohen, *The Urban Street Foods Trade: Implications for Policy* (Washington, D.C.: Equity Policy Center, 1984).

²³ Sporrek, footnote 10 above.

²⁴ Tokman, footnote 20 above.

are linked closely to each other. Many customers of street food vendors are persons involved in other informal-sector activities.²⁵

EMPLOYMENT AND INCOME

Marketing and distribution of foodstuffs in urban regions of developing countries generate relatively large amounts of income and employment. A survey of more than 2,000 wholesalers of agricultural goods and almost 5,000 retail and wholesale stalls at fish markets in Seoul, South Korea, reported that two to three workers were employed in each agricultural stall and four workers at each stall in the fish markets.²⁶ Food marketing and distribution are heavily dominated by informal-sector participants and small enterprises, which are considered by some economists to be ineffective in generating employment. Nevertheless, they absorb the labor of the operators and their family members on a full-time or part-time basis. They are an essential source of income, especially for poor households. Although street vendors and hawkers often work alone, market and stall vendors and owners of small shops usually are aided by members of their immediate or extended family. Small enterprises to prepare or distribute food can engage one to three family members as well as other employees.²⁷ In small-scale Colombian industrial firms with fewer than ten employees, food-and-beverage enterprises account for approximately 16 percent of all employment, while in secondary cities like Pasto, Neiva, and Santa Marta, more than 25 percent of employment is in food-and-beverage enterprises.²⁸

The number of urban residents who depend directly on informal-sector activities for all or part of their income can be four to six times the total of such activities in a city. If formal-sector suppliers are taken into account, the number of persons who depend indirectly on earnings from informal-sector activities can be as high as ten times the sum of informal-sector participants. Profit margins for them are usually low, but many persons engaged in these activities earn higher-than-minimum incomes.

Women operate many food-vending and food-preparing activities in third-world cities. These activities are a source of employment and earnings that supplements family income and are noticeably dominated by women in Asia and Africa.²⁹ Street food vending is conducive to participation by women because it can be entered with a low capital investment and can be started on a small scale, sometimes with only a table placed outside a house. Participation can be part-time so that the women continue to do household

²⁵ Barth, footnote 9 above.

²⁶ Bai-Yung Sung, Efficiency in Agricultural Wholesale Market Activities in Seoul, *Journal of Rural Development* 3 (1980): 127-151.

²⁷ Cohen, footnote 22 above.

²⁸ Francesco Uribe-Eschevarria and Edgar Forero, *The Role of Informal Activities in the Process of Urbanization: Small-Scale Industries in Peripheral Regions of Colombia*, University of the Andes, Interdisciplinary Center, Bogota, 1985.

²⁹ Cohen, footnote 22 above; Barth, footnote 9 above.

chores. Often the women in these activities simply add more food to the family cooking pot.³⁰

EFFECTS OF URBAN FOOD-MARKET GROWTH ON AGRICULTURE

Expansion of urban food markets generates strong demands for agricultural goods from rural hinterlands of large cities or elsewhere. Being an outlet for agricultural products is not the only role of large cities in developing countries. With growth cities create increasing demands for nonagricultural goods in rural areas. There is pressure to change and intensify cropping patterns and to modernize technology in rural areas, while the capacity to process and market food supplies is expanded.

The point is illustrated by the effects of demands from the Bangkok metropolitan area on farm and nonfarm activities in the surrounding countryside. Rural households that are located closest to the urbanized zone have access to economic opportunities that free them from exclusive dependence on agriculture for their livelihood.³¹ Food preferences tend to change when persons move to urban areas. Cropping patterns and production in the Central Plains reflect this sort of shift in demand. The continued growth of Bangkok has transformed farming from semisubsistent to commercial production. Because of increased demand, many farmers have adopted modern technology to raise their output substantially. Farms in the provinces adjacent to Bangkok produce three to four times as many fowl as in other regions of Thailand; a similar pattern exists for production of pork and fruit.³² Increased demand for foodstuffs in the metropolitan area brought green-revolution technology, land consolidation, and structural changes in agricultural production. During the 1970s specialized rice production, marked by labor-intensive transplanting methods, displaced the traditional broadcast technique. Likewise the traditional varieties of rice were replaced by modern, short-duration, high-yielding species that allowed many farmers to engage in double cropping. Yields from both wet- and dry-season rice increased substantially in areas where land consolidation had occurred. Double cropping and land consolidation in turn made it feasible for farmers to use machinery in field preparation and in other phases of cultivation. The use of tractors made in Thailand expanded employment in nonagricultural areas, a trend furthered by the need for local assembly and repair operations. Use of fertilizers and other manufactured goods for dry-season rice production was another multiplier factor for the economy.³³

With the increased agricultural production in the Central Plains, the government expanded elements of the basic infrastructure—roads, irrigation networks, and extension services—so that farmers could make better use of

³⁰ Cohen, footnote 22 above.

³¹ Thailand: Rural Growth and Employment (Washington, D.C.: World Bank, 1983), 86-88.

³² Thailand, footnote 31 above.

³³ Phisit Pa'kasem, Synthesis of Findings, in *Rural-Urban Relations*, footnote 6 above, 1-64.

modern inputs like high-yielding seeds, fertilizers, pesticides, and credit to maximize returns in production and earnings. New employment was thus opened in commerce, off-farm services, and construction. Access to employment in Bangkok permitted a flow of income earned there to rural families. By the end of the 1970s approximately 75 percent of rural households in the area surrounding the city had family members working there. Small urban centers in the Central Plains became more important in marketing, bulking, and assembling agricultural goods for shipment to Bangkok. These places began to perform significant financial functions when money entered as credit from Bangkok to local farmers. The range of social services, especially in health and education, available at these centers broadened in response to demands from local households. With stronger linkages between Bangkok and the surrounding rural area, low-order settlements became the main connector between the rural and urban economies for small-scale and large-scale farmers. Nearby towns emerged as the direct sources of credit, services, agricultural inputs, and extension services for the rural population in general; these towns also were the places where large-scale farmers invested their savings.³⁴

Similar results occurred with urban growth in other developing countries. The construction of a new capital for Brazil during the 1960s created strong demand for foodstuffs that increased productive opportunities for 90,000 persons in the surrounding state of Goiás. Cropping patterns there changed in response to the demands for goods to consume in Brasília. Farmers in Goiás had traditionally provided beef and rice to Rio de Janeiro and São Paulo, but the growth of Brasília opened a new market for both traditional products and crops not previously grown or emphasized in the region.³⁵

Similar changes of land use, cropping patterns, and productive activities occurred in rural areas around Lahore, Pakistan, during the 1950s and 1960s.³⁶ As the population of Lahore expanded, dominant crops became grouped in sequential belts around the city. In the belt nearest it, perishable vegetables, requiring immediate proximity for sale to the urban markets, dominated production; next came a belt of fodder crops; third and yet more distant was a specialized belt of cereals and grains that were less perishable and cheaper to transport than either vegetables or fodder crops. The agricultural belt farthest from the city was dominated by cotton, sugarcane, and oilseeds. Vegetable cropping paralleled the outward extension of roads and irrigation systems from the city into fields that formerly produced fodder and cereals. The fodder belt expanded in response to the urban demands for dairy products and feed for draft animals.

³⁴ Utis Kauthien, Low Order Centers Study of Rural-Urban Relations in Thailand, in *Rural-Urban Relations*, footnote 6 above, 136-201.

³⁵ Martin T. Katzman, Regional Development Policy in Brazil: The Role of Growth Poles and Development Highways in Goiás, *Economic Growth and Cultural Change* 24, No. 1 (1975): 75-107.

³⁶ M. K. Elahi, Evolution of Cropping Patterns in the Areas of Pakistan: A Case Study of Lahore, *Pakistan Geographical Review* 31, Nos. 1-2 (1976): 7-18.

RESEARCH AND POLICY IMPLICATIONS

International agencies and governments of developing countries can strengthen urban food-marketing systems. Achievement of this goal would increase local agricultural production, would augment employment, and would encourage small-scale enterprises and informal-sector activities that deal with distribution, preparation, and sale of food. Another result would be improved conditions for the urban poor by ensuring adequate supplies of food with less fluctuation in amounts and prices.³⁷

Small-scale enterprises are likely to be the most important component for food-distribution systems. Large firms are usually able to cope with the times, but small enterprises and informal-sector vendors face problems that sometimes are a consequence of official policies and must be ameliorated by reforms and assistance programs. Informal-sector enterprises are essential to stability in urban economies. They proliferate because they are important sources of income and employment to the households at the lowest socio-economic level of society. They provide technical and entrepreneurial training for the poor, especially women. These small-scale enterprises use a favorable mixture of capital, labor, and energy. In urban areas they are a crucial link to modern manufacturing and rural areas. They mobilize savings of persons who are usually excluded from or have little access to formal credit, and they have proved to be resilient even when the overall economy of a country may be having difficulty.

These enterprises are beset by severe problems: a lack of capital, skilled operators, and reliable sources of materials and supplies, as well as restriction, regulation, and alleged harassment by local authorities.³⁸ Assistance programs should address solutions to these problems. Efforts at control have included clearing streets of vendors or confining them to certain areas, enactment of impossibly high sanitary standards, and alleged solicitation of bribes.³⁹ No amount of harassment or restriction eliminates the informal-sector portion of urban food distribution. Nor is that result particularly desirable in view of the role of vendors, hawkers, and small shops in providing food at affordable prices. Governments in developing countries should educate the public to use the services effectively, should allow them to operate legally except in places or situations where they are an obvious threat to public safety or health, and should encourage their expansion by providing necessary credit. Authorities can also ease regulations about employing children in family-operated stalls and shops, can provide infrastructure and services

³⁷ Barry Popkin and Eilene Bisgrove, *Urbanization and Nutrition in Low Income Countries*, Working Paper, Carolina Population Center, Chapel Hill, North Carolina, 1987.

³⁸ *Assisting the Smallest Economic Activities of the Urban Poor* (edited by Michael Farbman; Washington, D.C.: USAID, 1981).

³⁹ T. G. McGee and Y. M. Yeung, *Hawkers in Southeast Asian Cities: Planning for the Bazaar Economy* (Ottawa: International Development Research Centre, 1977).

for efficient and effective operations, and can offer managerial assistance to strengthen the marketing chains of which they are an important part.⁴⁰

Urban food enterprises at small and medium scales in the formal sector also suffer from insufficient public attention to their needs and from inadequate marketing facilities in many cities. Operators at these scales may lack access to commercial credit needed for efficient operation or expansion of their enterprises. Other problems may inhibit efficient distribution of foodstuffs in a city. Market facilities may be too small to offer economies of scale or may be located in congested residential areas where operating costs are high. Facilities may be insanitary or uncovered so that they do not function in inclement weather. High taxes and leasing costs drive up food prices for consumers. When operators of quasi-legal stalls alongside public markets undercut prices and do not follow grading or sanitary standards, the capacity of food merchants to function effectively is further undermined. Inadequate standards for grading, sorting, and packaging in wholesaling destroy consumer confidence in quality control and accelerate deterioration of perishable products.⁴¹ Merchants also complain that governments fail to provide adequate information on standards, prices, and taxes.

A substantial body of evidence indicates that access to capital is one of the most significant problems for small-scale entrepreneurs in both the formal and informal sectors. The smallness of the administrative unit is the key: many governmental credit programs are too small and too expensive for efficient administration.⁴² Although costs of starting and operating small enterprises are low, entrepreneurs have great difficulty obtaining loans from formal institutions. Family, friends, or private loans at high interest rates are the usual sources.⁴³ Research clearly demonstrates that access for small-scale entrepreneurs to inexpensive, reliable credit is essential for effective functioning and expansion of food-marketing systems in third-world countries.⁴⁴

Operation of these systems can be improved by public investment in basic infrastructure and services like stall facilities, potable water and electricity in marketplaces, public transportation between markets and low-income zones, and access roads between rural supply areas and marketing centers. In some countries, large investments are needed in marketing facilities, especially at central food markets. Whether operated by public agencies or private firms, central markets assume the characteristics of public facilities. Adequate space, potable water, weighing and grading equipment, and access for customers are essential. Fees, licenses, and rents are important contributions to municipal revenues, and such facilities should be viewed both as components in the food-distribution chain and as sources of sorely

⁴⁰ McGee and Yeung, footnote 39 above.

⁴¹ Sung, footnote 26 above, 147.

⁴² Cohen, footnote 22 above, 33.

⁴³ Barth, footnote 9 above.

⁴⁴ Jeffrey Ashe, Synthesis and Overall Findings, in *Assisting*, footnote 38 above, 1-56.

needed municipal income. Public investment in some countries should strengthen a system of fair-price or ration shops, operated by either public or private agencies, that supply food staples at subsidized prices to the urban poor.⁴⁵

Transportation access and costs are important considerations in an urban food-marketing system. Most consumers, but especially the poor, depend on public transportation to go to and from central markets. As much as 80 percent of the poor requires one or more trips on public transportation to reach a central market.⁴⁶ Access is equally crucial for sellers, middlemen, and brokers.⁴⁷ Transportation and access are extremely important factors in encouraging farmers to expand production for urban markets.

Research is needed on almost all aspects of urban food-marketing systems before international agencies or governments can formulate and implement effective policies, programs, and strategies to strengthen them. The effects of urban expansion on household eating habits and the capacity of the distribution system to satisfy them are primary research focuses. Likewise more must be known about organizational structures, operating processes, vertical coordination of markets, and effectiveness of linkages with rural supply areas. As the number of poor households continues to rise in large cities, more understanding is required about the relationships between food distribution and nutritional quality of diets in urban areas. Research on effective means to ensure access by poor households to nutritionally adequate diets at affordable costs is scarce. Economic aspects such as capacity to absorb labor and employment and the magnitude of investment requirements and opportunities need elaboration.

Governments and international agencies have some experience in assisting small-scale and informal-sector activities. However, more information is required to define what may be the most effective role of the public sector in improving their performance by regulation, by providing credit and technical aid, and by training operators. Finally the contribution of public infrastructure, services, and facilities to the functioning of urban food-marketing systems needs critical analysis. In sum, by giving attention to improved effectiveness and efficiency for food distribution in large cities, governments and international agencies can contribute importantly to expanded production and marketing of foodstuffs in rural areas, can generate employment in small-scale enterprises and informal-sector activities, and can strengthen commerce in rapidly expanding metropolitan areas of developing countries.

⁴⁵ Popkin and Bisgrove, footnote 37 above.

⁴⁶ Popkin and Bisgrove, footnote 37 above.

⁴⁷ Gerald A. Barth, *Employment and Earnings in Food Marketing in a Philippine Regional Center*, *Human Organization* 43 (1984): 38-43.