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Food Policy in the Era of Supermarkets: What's Different?

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Abstract

This paper examines the role of supermarkets in developing countries from a "food policy" perspective. The entire food system is being affected by supermarkets, from supply chains impacting small farmers, through traditional marketing channels, to opportunities facing consumers. Issues of macroeconomic impact, distribution of benefits by income class and health consequences of behavioural change by consumers in the face of new consumption possibilities are among the themes discussed.

Keywords: *Food policy, food security, consumer perspective, macroeconomic impact*

1. Introduction: The Changing Vision of Food Policy

The purpose of the central analytical vision of food policy, articulated two decades ago, was to integrate farmer, trader and consumer decision-making into the open economy, macro framework needed for rapid economic growth (Timmer, Falcon and Pearson 1983). The explicit goal was a sharp reduction in hunger and poverty, which would be possible if market incentives stimulated productivity and income gains in agriculture while poor consumers were protected by stable food prices and rising

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real wages. The marketing sector was the key to connecting these two ends of the food system. Supermarkets were not mentioned because they were a feature of developed countries' economies and the "food policy paradigm" focused on hunger and poverty in developing countries, where supermarkets were virtually nonexistent in the early 1980s.

The analytical story, policy design and programme implementation were complicated, requiring analysts to integrate models of micro and macro decision-making in a domestic economy open to world trade and commodity markets. At its best, the food policy paradigm sharply improved the development profession's understanding of the underlying structure and dynamics of poverty and the role of the food system in reducing it (Eicher and Staatz, 1998). As part of this understanding, food security came to be seen as involving two separate analytical arenas. The first, at the "micro household" level, required analysis of food access and entitlements. The second, at the "macro market" level, required analysis of food price stability, market supplies and inventory behavior. Again, supermarkets did not seem relevant to either level of analysis.

"Food policy analysis" provided policy-makers a comprehensive, but intuitively tractable, vision of how to connect these two arenas and improve food security for the consumers in their societies. This vision was always consumer-driven. Farmers, as food producers and middlemen in the marketing sector that transformed farm output in time, place and form, were seen as "intermediate" actors in the efficient production of consumer welfare. Thus the food policy paradigm fits squarely within the standard framework of neoclassical economic analysis.

Over the years, there have been a wide range of challenges to this paradigm, quite independently of the recent emergence of supermarkets in poor countries. In response, Simon Maxwell and Rachel Slater (2003) edited a special issue of *Development Policy Review* under the theme "Food Policy Old and New". Their introduction includes the following observations on the evolution of food policy:

> The very term 'food policy' induces nostalgia for the 1970s and 1980s; the first meetings of the World Food Council […], the establishment of the International Food Policy Research Institute […] and of the journal *Food Policy* […].
>
> The emphasis on food policy in developing countries was necessary. It was not just that the world food crisis of 1972-4 had triggered new interest in the availability of and access to food, especially at global and national levels. It was also that policy-makers had begun to appreciate the interdependence between supply- and demand-side issues and the value of applying especially economic analysis to the links. […] Timmer, [Falcon and Pearson] reminded us that "where the food system is headed, of course, is the key question". […]
>
> Amartya Sen (1981) is usually credited with shifting the food strategy discourse towards entitlement and access. […] Entitlement, vulnerability and risk became the new watchwords: this was the emergent language of food security.
>
> The idea of 'food security' has dominated since the early 1980s. […] Donors developed an enthusiasm for national food security planning, partly as a 'proxy for poverty planning' during the darkest years of structural adjustment […] The International conference on Nutrition, the World Food Summit and WFS—Five Years Later cemented the consensus. A reduction in under-nutrition even made it into the Millennium Development Goals. […]
>
> Meanwhile, however, other issues began to infiltrate. They included a concern for the commercialisation and industrialisation of food systems, a stronger focus on the institutional actors in food trade, including supermarkets, warnings about the environmental consequences of new technologies […] and issues to do with health, including problems of food safety and the growth of nutrition-related illnesses, especially heart disease and diabetes. Often, these issues were picked up outside the mainstream, or mainly in developed countries. Perhaps, to those primarily concerned with famine and severe under-nutrition in the very poorest countries, they seemed superfluous.
>
> Not so. The core message of this volume is that what we term the 'new food policy' cannot be ignored […]. The world food system, described only a few years ago, by Gaull and

> Goldberg (1993), as 'emerging', is no longer quite the chrysalis it once was. The pace of change is accelerating. The challenges are daunting. They are immediate. And they need to be on the agenda of policy-makers throughout the developing world. A preoccupation with food security is no longer sufficient. It is necessary to rediscover food policy.

The "new" food policy agenda is very broad and many of its core topics were treated in the FAO workshop for which this paper was first prepared. The paper tries to outline the context for these discussions, focusing especially on what kind of analysis can best help us understand the impact of supermarkets on the food systems of developing countries. Even this narrower focus intersects most of the topics now incorporated in the "new" food policy.

There are many questions to address. How does the rapid emergence of supermarkets as the dominant intermediary between farmers and consumers, even in poor countries, change the analytical task and the nature of the food policy vision? How does policy design change? What new programmes need to be implemented to keep the food system focused on reducing poverty?

The paper addresses these questions in four parts. The first addresses specifically what is different between the old and the new food policy paradigms and where supermarkets influence that difference. The second part puts the entire food policy debate in historical perspective as a reminder to focus our attention on the long-term process of economic development as the basic driver of the phenomena we are observing; the new role of supermarkets is addressed in this context The third part of the paper addresses sectoral and macro dimensions of the supermarket revolution. The fourth part offers some generic policy recommendations in the form of a list of "dos and don'ts", and proposes an integration of the old and new food policy paradigms as a framework for the research needed to make the policy recommendations more concrete.

2. Food Policy: What's Different?

It is useful to characterize the "old" and "new" food policy paradigms in relatively simple two-by-two figures that capture the key concerns of each paradigm. Both focus analytical attention on issues at the country level as well as at the household level and this provides one dimension of the comparison. The original food policy paradigm focused analysis on the links between poverty and food security. This provides the other dimension for discussion in Figure 1, which fills in the four cells of the original food policy paradigm.

Alternatively, the new food policy stresses the "double burden" on societies facing substantial degrees of hunger at the same time they face rising levels of nutritional problems of affluence – obesity, heart disease, diabetes, etc. The "development" or poverty dimension is more sharply focused on the problem of exclusion, at the national level as well as the household level. Figure 2 fills in the cells for this paradigm.

Figure 1: The "Old" Food Policy

	Food Security	**Poverty**
Country Focus	Market prices: Level and stability	Economic growth and rising real wages
Household Focus	Access to Food – incomes – prices – knowledge (esp. for micronutrients)	Jobs, especially through a dynamic rural economy, migration and labour-intensive manufacturing

Figure 2: The "New" Food Policy

	The "Double Burden" of Hunger and Obesity	**Exclusion**
Country Focus	Government costs of health care and pensions	"Non-globalizers" (Governance?)
Household Focus	Lifestyle and health knowledge (are we "hard-wired" for scarcity?)	Small farmers Unskilled workers Low education

3. The Food and Health Dimension

A comparison of Figures 1 and 2 shows how starkly the two paradigms are different (although it is notable that supermarkets *per se* do not appear in any of the cells of either paradigm). At the country level, the earlier concern for keeping food prices at a level that balanced producer and consumer interests – with price stabilization around this level an important policy objective – gives way to equally important concerns for the budgetary consequences for governments (at national and local levels) of the health outcomes for entire societies of dietary choices.

At the household level, the traditional focus on access to foods (including intra-household access and distribution) stressed income and price variables, with a very limited role for household education and knowledge (except possibly in the derived demand for micro-nutrients). Much of the quantitative research in food policy over the past three decades has involved a search for the behavioral regularities that linked households to these market-determined variables (Timmer 1981). Again, the contrast with the new concerns is sharp. Health professionals are either pessimistic about the political reality of using economic variables to influence dietary choices (one debate was over the efficiency of taxing fats in foods, taxing fat people, or taxing the health consequences of being fat), or are doubtful that economic incentives will actually change dietary behavior where affluence permits a wide array of choices. Consequently, there is a much sharper focus on trying to change lifestyle through improved health knowledge and nutrition education.

There was a pointed debate during the FAO workshop over whether approaches to changing lifestyles through education will work. In particular, if the dietary patterns of affluence have a significant genetic component – that is, humans are "hard-wired" for an environment of food scarcity and have few internal control mechanisms over dietary intake in an environment of permanent affluence and abundance – much more coercive efforts may be needed to change dietary behavior (and activity levels) than is implied by the education approach. On the other hand, such coercion directly contradicts consumer sovereignty and the basic principles of a democratic society.

Supermarkets are both the purveyors of the food abundance (and much of the "junk" food sold) and a possible vehicle for bringing about dietary change, either through improved nutrition education within stores, health warnings on particular foods that cause nutritional damage, or even regulations on what kinds of foods are available for purchase. The rapid spread of private standards on food safety and aspects of production technologies shows that public policy is not necessarily the fastest or most effective way to bring about changes in food marketing. These standards could easily incorporate health dimensions as well, especially if lawsuits over "fast food" contributions to obesity begin to be won by litigants.

4. The Poverty and Development Dimension

One of the key messages for developing countries in *Food Policy Analysis* was the link between poverty and food security, at both the national and household levels. In turn, poverty was considered primarily an economic problem that could only be addressed in a sustainable fashion by linking the poor – mostly in rural areas – into the process of economic growth. A dynamic agriculture as a stimulus to forward and backward linkages within the rural economy served as the "prime mover" in this process. Through improved agricultural technology, public investments in rural infrastructure and the end of "urban bias" that distorted incentives for farmers, policy-makers could have a simple and clear approach to reducing poverty and improving food security.

With success in the rural economy, migration to urban areas would be a policy more of "pull" than of "push," especially if favourable macro-economic and trade policies were stimulating rapid growth in a labour-intensive manufacturing (and construction) industry. When combined, these activities pull up real wages and, when sustained, lead to rapid reductions in poverty (Timmer 2002, 2003). In many ways, this paradigm could be described as an "inclusion model" because of its focus on including the poor in the rural economy, including the rural economy in the national economy, and including the national economy in the global economy. Its greatest success was in East and Southeast Asia from 1960 to 1997, but the model has been under attack since then as the benefits of globalization seem not to have been as widely shared as hoped.

The failures of globalization provide the analytical theme for the new food policy paradigm. Figure 2 characterizes this theme around the analytics of "exclusion". At the national level, the question is why so many countries have been "non-globalizers". The essence of the debate is whether the global economy, in the form of rich countries and transnational corporations, has excluded these countries from participating in trade and technology flows, or whether the countries themselves have been unsuccessful in the process because of domestic shortcomings in policies and governance (including corruption).

The debate has a local focus as well. Within an otherwise well-functioning and growing economy, many groups can be excluded from the benefits of this growth. Unskilled workers unable to graduate to higher technologies and uneducated youth unable to compete in a modern economy are a sizeable proportion of the work force in countries with poor labour and training policies and resources. Globalization makes it more difficult for these countries to compete for trade and investment flows that would provide the first steps up the ladder of higher productivity.

The "exclusion" lens focuses especially on small farmers. Their fate has been a source of policy concern well before the supermarket revolution gained speed in the early 1990s in Latin America, but there is no question that the issue is now squarely on the policy agenda. Indeed, this *was* the agenda for much of the FAO Workshop. It was precisely over this topic that the debate between the relevance of the old and new food policy paradigms took shape: which approach offers the most useful insights and policy/programme guidance for assisting small farmers in their efforts to remain as viable suppliers to supermarket procurement officers? The answer, it was argued, depended on the time horizon of analysis. In the short run, finding income opportunities for small farmers is essential, but in the longer run they have other options, including migration to urban jobs.

5. Food Policy and Supermarkets in Historical Perspective

The "big" question in social science is whether to study diversity or central tendencies. In the context of economic development, this question translates into whether to analyze the process from the perspective of changing welfare of entire societies over long periods of time, or whether to study inequality in its many dimensions during a particular epoch. The two perspectives obviously relate to each other, possibly even in causal ways, as is illustrated by the modern debate over the contribution of income inequality to economic growth, and vice versa (Easterly 2003).

Figure 3 provides a framework for thinking about these issues in the context of the rapid emergence of supermarkets as the dominant retail supplier of food, even in developing countries. The horizontal axis depicts the long-run process of economic growth, or the transformation of societies from "poor" to "rich". This is the dominant transformation that humanity has undergone in the past ten millennia, and is "the natural course of things", to quote Adam Smith's observation in the eighteenth century.[1] To see the dominance of this transformation requires a very long time horizon, more a purview of economic historians than of development specialists.

The various dimensions of this process have been summarized as the "structural transformation", wherein entire societies undergo the wrenching changes associated with agricultural modernization, migration of labour from rural to urban areas and the emergence of urban industrial centers. As part of this process, as both effect and cause, the demographic transition moves a society from an equilibrium of high birth and death rates to a "modern" equilibrium of low birth and death rates. The structural transformation has taken as long as three centuries in England and the United States (and is still continuing), and as little as a century in Japan and its East Asian followers. The lengthy process provides a cautionary message to those in a rush to transform their societies.

At the same time that this structural transformation is unfolding, there is enormous diversity across societies in how they organize themselves politically, define themselves culturally and reward themselves economically. This is the vertical dimension that Figure 3 illustrates in a crude and simple fashion. During any historical epoch, there will be a set of identifiable "drivers" that are pushing the economy to the right, from poor to rich, while at the same time structuring the diversity within societies and among them.

In the current era – post-World War II to keep things concrete – these drivers are globalization, urbanization and technology. It is no accident that these three forces were the theme of the FAO Workshop. The question is: how have these three forces influenced the rapid emergence of supermarkets? There is now widespread agreement that the supermarket revolution itself has been driven by precisely these three drivers of overall economic change, but a dilemma remains in using

[1] The full citation runs as follows: "Little else is requisite to carry a state to the highest degree of opulence from the lowest barbarism than peace, easy taxes, and tolerable administration of justice; all the rest being brought about by the natural course of things." Lecture by Adam Smith in 1775, cited in E. L. Jones (1981) , p. 235. The perspective here also draws heavily on Jones' *Growth Recurring*, published in 1988.

this as an answer to the speed of change in the food retail sector. After all, globalization, urbanization and technology were equally cited for the rapid economic advances in the nineteenth century. What is different now?

The answer is given by changes in the relative scarcity of important economic resources, changes that are themselves driven by the new industrial organization of the global food supply chain. Transnational corporations (TNCs), using supermarkets as their instruments, are increasingly dominant in this global food supply chain: indeed, arguments are made that the TNCs are using this dominance to extract monopoly profits from consumers worldwide. The dominant role of the TNCs is not in question; the Workshop heard plenty of evidence from Reardon and his colleagues on the role of foreign direct investment in the consolidation of food retailers in all countries they have studied (Reardon et al. 2003).

But despite the straight line often drawn in traditional industrial organization literature from structure to conduct to performance, the new focus is on performance itself, in the form of profit rates above a competitive norm. Not surprisingly, these profits tend to accrue to the relatively scarce resource in the system under analysis and to whoever controls those resources. In the global food retail system, there are three basic possibilities for what resource is scarce, although these extend outside the traditional triad of land, labour and capital.

First, in a world of global competition, the scarce resource might be physical and marketing access to food consumers, especially food consumers in affluent countries and relatively affluent consumers in poorer countries. If supermarkets come to control this access because of scale economies and modern shopping habits, excessive profits might be earned by exploiting consumers who are forced to shop in these supermarkets.

A second possible scarce resource is access to, or control of (through intellectual property rights), the technology that lowers transactions costs throughout the entire food supply chain. Increasingly, this is information technology that permits supermarket managers exquisite control over procurement, inventory levels and knowledge of consumer check-out profiles. One of the world's largest supercomputers is in Bentonville, Arkansas, the headquarters of Wal-Mart. Every product on every shelf in every Wal-Mart store is in that computer, and the supplier of the product does not get paid until a customer has it scanned at the checkout counter. Then, instantly, the supplier is paid and notified that the item needs to be restocked. Such technology provides a powerful competitive advantage in cost control, quality maintenance and product tracking in case of defects or safety problems. When this technology is applied globally to the food supply chain of a transnational supermarket, transactions costs will be "pushed out of the system" all the way from the food aisle, through global marketing functions, to individual farmers.

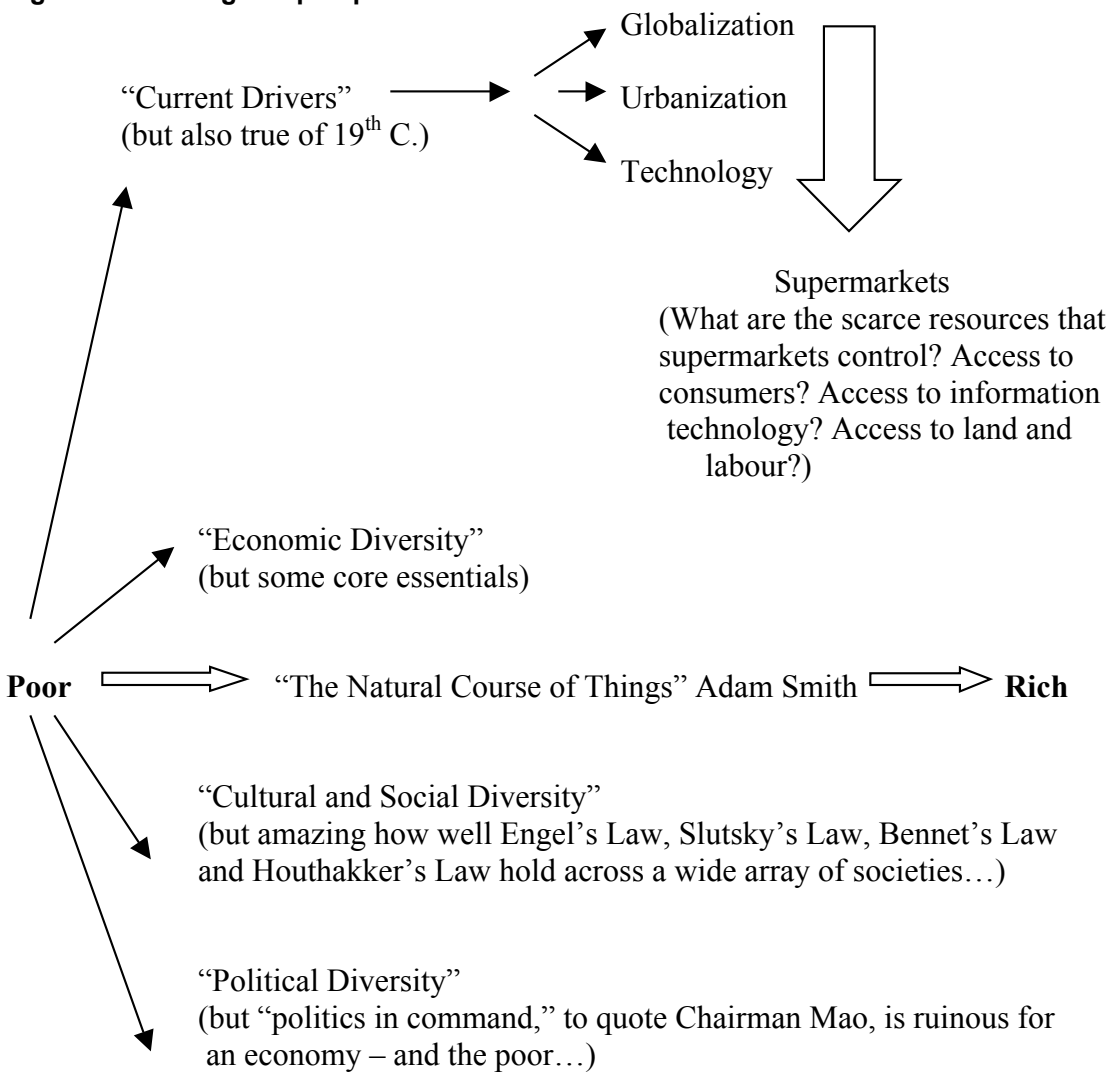
The third possibility for the scarce resource in this system is the food commodity itself –the rice, potato, Belgian endive, bell pepper, fresh fish or chuck steak. Because supermarket quality and safety standards are so high and rigid, the ability to supply the raw commodities that meet these standards might command a price premium and additional profits for the farmers. Beneath commodity supply, of course, is the land and labour (and knowledge and technology) required to grow the commodities. Thus, ultimately, if commodities themselves are the scarce resource, capable of earning excess profits, these profits will accrue to land, labour, or both (or to the management function that harnesses the knowledge, technology and finance, although for small farmers this tends to be in the same hands as the land and labour).

Basic competitive forces will lead most "monopoly" profits or rents to end up in the hands of the owners of the scarcest resource. The evidence so far is that access to affluent consumers and to powerful information technology is scarcer than the ability to produce high-quality commodities, especially when individual producers are forced to compete on a global playing field. But this does *not* mean that TNC supermarket chains are earning monopoly profits because they have access to, or even control of, these scarce resources. The cost of information technology is dropping with Moore's Law, and access to affluent consumers has turned out to be highly contestable – thus generating competitive results, despite the industry structure. Surprisingly, the picture so far is one of intense competition and

low profits. Ahold, once the world's largest food retailer, just announced a loss of US$5 billion for 2003, with expectations of a similar loss in 2004.

In summary, what does a long run perspective have to say about the supermarket revolution? First, it is understandable within the context of the structural transformation and the long-run evolution of agriculture within that process. Second, basic economics, with its stress on returns to scarce factors of production, is surprisingly helpful in understanding the inner dynamics of the process. But third, this perspective provides little guidance on how to assist small farmers as they compete for contracts from supermarket procurement officers. For that, the diversity of the global food system, rather than its common themes and forces, needs to be understood. Still, there are some important lessons that come from combining the food policy perspective and the historical, analytical perspective. These lessons tend to play out at the sectoral (marketing) level and at the macro level, in terms of how the overall economy is performing.

Figure 3: The long-run perspective



6. The Sectoral and Macro Perspective

This part of the paper outlines the basic issues for development presented by the supermarket revolution. These issues cut across the entire economy, from agricultural technology and farmer responsiveness, to concentration in processing and retailing channels, to standards for food quality and safety, to food security at both micro and macro levels. Thus understanding the impact of supermarkets presents serious analytical *and* policy challenges.

These challenges transcend the different issues dealt with by the "old" and "new" food policy paradigms. In particular, the key issues remain of how to achieve and sustain rapid reductions in poverty and hunger through interventions (or ending interventions) in the food system. The supermarket revolution cuts both ways in this, offering greater consumer choice and lower prices for the retail services provided, but with a track record of consolidating supply chains to a handful of reliable producers able to meet quality, safety and cost standards, and thus excluding many small farmers from access to supermarket customers. The key issue is whether policy-makers have an opportunity – in the face of very serious challenges – to leverage the impact of supermarkets on consumers in ways that do not increase rural poverty. To answer that, a deeper understanding of the impact of supermarkets on the marketing sector and the macro economy is needed.

Supermarkets and the Marketing Sector: Complements or Substitutes?

The marketing sector serves two primary functions in a market economy: it generates signals between consumers' desires and farmers' costs through price formation, and it performs the physical functions of marketing: transforming raw commodities at the farm in time, space and form, and delivering them to consumers' tables. These are inherently "coordination" tasks, and they require an adroit combination of public and private investments if they are to be carried out efficiently. Historically, these investments have been made very gradually as farmers evolved from subsistence activities toward a more commercial orientation. Now that commercial activities are the norm, even in economies where efficient marketing networks have not had time to emerge, policy-makers are actively seeking new models and approaches to speed the creation of these networks. Supermarkets may get there first.

The growing importance of market interactions for farmers stems from at least three separate forces. First, the collapse of socialism has stimulated a rapid, if often painful, transition to a market economy. Second, increasing incomes have stimulated increased commercialization and diversification as part of an agricultural transformation.[2] Third, this commercialization and diversification is increasingly taking place with supermarkets as the main buyer of agricultural output.

The agricultural sector as a whole is likely to become much more diversified over the course of the agricultural transformation, when compared with a representative individual farm, but significantly less diversified than food consumption patterns. Unless agro-ecological endowments are nearly identical throughout the country, farmers with different resources are likely to specialize in different crops. This increasing specialization of farms (*decreasing* diversification) is consistent with *greater* diversity at more aggregate levels because of the commercialization of agriculture. As summarized by Pingali and Rosegrant:

> Commercialization of agricultural systems leads to greater market orientation of farm production; progressive substitution out of non-traded inputs in favor of purchased inputs; and the gradual decline of integrated farming systems and their replacement by specialized

[2] Three different processes of agricultural change are closely related, and hence often confused: the agricultural transformation, agricultural commercialization and agricultural diversification. See Timmer (1997) for a fuller explanation of how these three topics are connected. The discussion in this section draws on that paper.

> enterprises for crop, livestock, poultry and aquaculture products. The farm level determinants of increasing commercialization are the rising opportunity costs of family labour and increased market demand for food and other agricultural products. Family labour costs rise due to increasing off-farm employment opportunities, while positive shifts in market demand are triggered by urbanization and/or trade liberalization.(Pingali and Rosegrant 1995, pp. 171–72.)

Likewise, patterns of food consumption become more diversified than patterns of domestic agricultural production because of the rising significance of international trade, i.e. globalization. Bennett's Law suggests that there is an inherent desire for diversity in dietary patterns among most populations of the world. Low-cost transportation systems and falling trade barriers have generally opened to consumers a market basket that draws from the entire world's bounty and diversity.[3] Supermarkets are increasingly the vehicle for providing this diversity and consumers clearly support the trend with their buying power.

The growing roles of commercialization and globalization in connecting diversity of production at the farm level with diversity of consumption at the household level spawn new problems, however. In particular, increased commercialization requires that farmers learn how to cope with a type of risk that is of little concern to subsistence farmers: the risk of fluctuating prices. At the same time, specialization in crop production increases their risk from yield fluctuations. Mechanisms for coping with risk, including contractual arrangements with supermarkets, thus play a crucial role in understanding the commercialization of agriculture and the government's role in it. The interplay among price fluctuations, increasing reliance on international trade, specialization of farmers in production for the market in response to profitable new technology, and continued failure of market-based mechanisms for risk management in rural areas accounts for much of the policy interest of governments in the process of rural diversification. A key task of a new food policy paradigm will be to improve the policy choices governments make as they respond to this interplay of forces with interventions into the diversification process, especially efforts to regulate the emergence and behaviour of supermarkets.

One intervention employed in nearly all countries is the making of public investments that stimulate market development and efficiency. Efficient development of entire commodity systems, from input production and marketing through to downstream processing and consumption of the final product, requires the formation of extensive backward and forward linkages from the producer level. These linkages can be both technological – depending on engineering relationships and quality requirements, for example – and financial, depending on investment patterns from profits generated by commodity production and consumption patterns from the incomes earned in the sector. Many of these linkages exhibit economies of scale and can be developed to efficient levels only if the commodity is produced in a relatively cohesive spatial pattern. This process of market deepening is a natural result of regional specialization and one of the major forces that gradually but persistently produces such specialization.

Most countries want to speed up this gradual process, but have found that government investments alone are inadequate. Well-developed, low-cost marketing systems require sufficient supplies of the specific commodities being marketed to justify the full investments needed to capture any economies of scale to the system. *Achieving this balance is a simultaneous process*, which historically has meant the gradual evolution of both the supply and demand side of the market. The interesting question now is whether supermarkets are internalizing this coordination process and speeding the rate of specialization. If so, as specialized production grows in a region, the marketing system will expand to

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[3] See Chapter 2 of *Food Policy Analysis* for further discussion of Bennett's Law (Timmer et al. 1983) and Chaudhri and Timmer (1985) for the greater diversity of diets as affluence permits.

serve it in a coordinated (but closed to outside parties) way. The lower costs generated by specialization can confer very significant competitive advantages on regions that are both low-cost producers of a commodity and have an efficient marketing system that has adequate volume to capture the economies of scale implicit in the forward and backward linkages.[4]

Regional specialization in a range of agricultural products would thus seem to be the answer to the problem of too much diversification at the farm level. Such specialization permits the cost economies of scale (and learning) to be captured, while still diversifying the country's agricultural output. A problem remains, however. Although the country may be well diversified, individual farmers and regions are not. Significant price instability, whether generated strictly in domestic markets or transmitted from international markets, would have substantial income-distribution consequences for the farmers and regions concerned – unless their output is sufficiently negatively correlated with prices that net revenue is stabilized by unstable prices. When large regions depend heavily on a single crop for their economic base, the vulnerability from specialization is similar to that at the national level when cultivation of a staple food crop is widespread. When rubber producers, coffee growers or maize farmers specialize in production, each can face problems of income stabilization in the face of unstable prices or yields.

The consequences for income distribution of crop specialization at the farm or regional level are straightforward. With domestic price stability, small farmers can specialize in single crops, and regional diversification can keep surpluses from developing. But this strategy depends on price stabilization. Otherwise individual farmers must diversify to spread risks from price fluctuations. Such diversification is likely to incur high costs because of forgone effects of "learning by doing" and the scale economies inherent in marketing systems. Compared with national specialization in a single commodity, the macroeconomic consequences of regional vulnerability are not as great – unless all prices and yields move together. But the individual and regional problems should also receive the attention of policy-makers. Especially in countries with diverse regional interests, appearing to ignore the economic plight of distressed regions can have devastating consequences for the political stability of the country as a whole.

How will the increasing dominance of supermarkets influence performance of the marketing system in coping with these issues? First, there will be a concern for both the *efficiency* and *equity* of price formation, as more and more transactions are internalized by supermarket procurement officers. Such transactions are not open and transparent, and hence concern will grow over the shift in market power toward a few, large buyers, and over the likely exclusion of suppliers from these arrangements. Second, however, and partially offsetting the first concern, supermarkets can also internalize consumers' desires for price stability and hence can manage procurement contracts with stability in mind. Finally, if supermarkets in developing countries are as competitive as in rich countries, fears about monopoly control and market power will turn out to be ill-founded. The market for the food consumer's dollar seems to be highly contestable, even when only a small handful of players are able to survive the cost competition.

Macro Economic and Growth Issues

Most effects of supermarkets in developing countries are likely to play out at the firm and sector level, and macro economic effects will be modest. But they will not be trivial, especially as lower food costs translate into greater real purchasing power for consumers. The impact will then be felt through differential Engel elasticities: greater stimulus to manufactured goods and modern services; gradual retardation for staple foods, traditional clothing and basic housing. Managers of supermarkets themselves are fully aware of these trends, as a stroll down any aisle will demonstrate. By passing on

[4] This perspective on regional specialization has been generalized and formalized in Krugman's work on economic geography. See Krugman (1993).

lower costs, or improving food quality and convenience, supermarkets can actually speed up the structural transformation and the agricultural transformation that is part of it (Timmer 1988).

There will also be significant efficiency effects. The mantra of supermarket procurement officers is to "drive costs out of the food marketing system". Although these "costs" are also someone's income, especially farmers and traders in the traditional agricultural marketing chain, lowering food marketing costs not only allows lower consumer costs, with the effects noted above, but they also free up productive resources that can be used in more profitable activities. This is the process by which total factor productivity improves, and this improvement, including in the food system, is the basic long-run source of economic growth (Timmer 2002).

A final growth effect maybe the most important in the long run: the technology spillover effects that result from the use by supermarket managers of imported information technology and modern management techniques honed in the fierce competition of OECD food markets. Most of this technology arrives as part of foreign direct investment (FDI), which has been the main vehicle of rapid penetration of supermarkets into developing countries (Reardon et al. 2003). It is often proprietary, and supermarket owners go to great lengths to keep it internal to the company. But like most technologies, the knowledge that these tools and techniques exist is the key to rapid emulation, as local managers trained by the first wave of foreign supermarkets leave to establish their own companies and consulting firms. Thus the spillovers from introducing modern information technologies and management techniques can occur fairly rapidly and have widespread effects across the entire economy, not just in food retailing.

Supermarkets will affect not only the efficiency of the food marketing chain, but also the distribution of benefits from the value added in the process. In general, it is very difficult to say whether these distributional changes will be positive or negative – that is, whether income distribution will improve or not.

There are two important offsetting effects. On the negative side, the evidence is clear that rapid supermarket penetration into traditional food marketing systems can quickly displace "mom and pop" retail shops, traders in wet markets and small-scale wholesalers. In most of these cases, the people displaced earn relatively low incomes and will have to make significant adjustments to find new livelihoods. The distributional effect is likely to be negative and can be substantial if these small-scale food marketing firms are numerous and widely visible. Their imminent demise can also generate significant political resistance to the spread of supermarkets, an effect already being seen throughout Asia, but with historical antecedents in the United States, Europe and Japan.

The impact of supermarket penetration on the farm sector is, of course, the big question. The Latin American experience suggests that small farmers rapidly lose access to supermarket supply chains and are thus cut off from the rapidly growing "value added" component of the retail food basket. The suggestion is that these farmers risk falling further into poverty (Reardon and Berdeque 2002). The African and Asian experience is not so clear, and research is well underway to understand the nature of the problem and any potential governmental responses. Keeping a significant number of small farmers in the supply chain of supermarkets is likely to be essential for poor countries to reap widespread social benefits from the rapid domination by supermarkets. The impact on the traditional food marketing sector will be small relative to this impact on small farmers.

What are these potential widespread social benefits that could have positive distributional effects? The extraordinary spread and speed of supermarket penetration suggests that consumers love them. It is hard to argue that low-income consumers benefit differentially, at least initially, but lower real food costs across the board (corrected for quality, safety and convenience, all of which consumers value) clearly have an impact of greatest importance to the poor. Efforts to slow the penetration of supermarkets on behalf of small farmers and traditional agents in the food marketing chain need to keep this widespread consumer benefit in the calculus.

7. Lessons: Or, Can the Supermarket Revolution be Influenced?

There is great interest among policy-makers in how to influence the behavior of supermarkets in ways that serve the interests of important groups in society, especially small farmers and the owners of traditional, small-scale food wholesale and retail facilities. The FAO Workshop debated many objectives and approaches, and several broader issues were also put on the table. Two are especially important: (1) finding a way for food prices to "internalize" the full environmental costs of production and marketing; and (2) finding a way for supermarkets to be part of the solution to the health problems generated by an "affluent" diet and lifestyle, rather than part of the problem,. There were also concerns over the growing concentration in global food retailing and the potential market power that concentration implied. However, the evidence of fierce competition at the retail level for the food consumers' dollars kept this issue in the background.

A number of generic policy recommendations on how to approach these issues are offered below. As with most policy advice, the most important start with the word "don't". But there are positive steps as well, although all the recommendations lack specificity to local situations. To address these, further research within a clear and policy-oriented framework will be needed. A first cut at this framework is presented at the end of the paper.

Three Things Not To Do

1. *Cause harm*. Especially with respect to the broader policy agenda discussed at the Workshop, many of the suggestions can only be described as "social engineering". It is important to remember that many great political and economic experiments over the past two centuries, most of them done in the name of improving the welfare of the poor, have turned out to be catastrophic for the citizenry.

2. *Miss the forest for the trees.* It is important to keep our eye on the real objective of economic policy, which is to improve the welfare of as many people as possible, with special attention to the absolute poor. The objective is *not* to improve the lives of small farmers, unless that is a means to our end. In many circumstances, agriculture can be the engine of pro-poor growth, and small farmers can participate in that growth directly. But they might also participate (perhaps more effectively) indirectly, by getting jobs in rural non-farm activities or by migrating to urban jobs.

3. *Throw the baby out with the bath water.* The debate between the "old" food policy and the "new" food policy, especially over how to analyze and intervene to offset the damaging health consequences of the "double burden of malnutrition", is sharper than it needs to be. The basic question is whether economic analysis of the food system remains useful in the context of the broader, interdisciplinary problems now manifested in that food system. Just as *Food Policy Analysis* pushed economists to extend the range of interests considered relevant to economic methodologies, so does the new food policy call for incorporating health and environmental dimensions, for example, into this analysis. Economics is not unique in having methodologies for addressing these broader dimensions of decisions by food producers, marketers and consumers. But no interventions to solve these problems will be sustainable unless the economics make sense.

Three Things To Do

1. *Incorporate the "new" food policy issues into the analysis*. It is much better to solve real and relevant problems than "artificial" problems that have neat analytical solutions (despite the intellectual

appeal of the latter kind of problem, especially to academics). But incorporating these issues into the analysis requires getting the facts straight. Emotions, prejudices and reliance on anecdotes run rampant in this arena, and, as a field, development studies in particular is prone to follow fads. There are immediate implications for how we do research and how we train scholars and policy analysts to work in this field. The research will require long-term panel data to carry out the sophisticated analyses that can disentangle subtle health and environmental effects from other, often more powerful, trends driven by short-run economic, ecological, or weather phenomena. Training will require a breadth of interdisciplinary perspectives on top of deep disciplinary skills.

2. *Design, lobby for and implement* ***social safety nets***. In doing so, however, it is important to realize that social safety nets are most efficient in helping families cope with transition problems and short-run crises, not with chronic poverty. To solve the problem of chronic poverty, especially as experienced by small farmers, there is no alternative to economic growth, sustained over decades. There are opportunities to make this growth more "pro-poor" than it might be if left to market forces, but getting the growth process going in the first place will be critical to reducing poverty.[5]

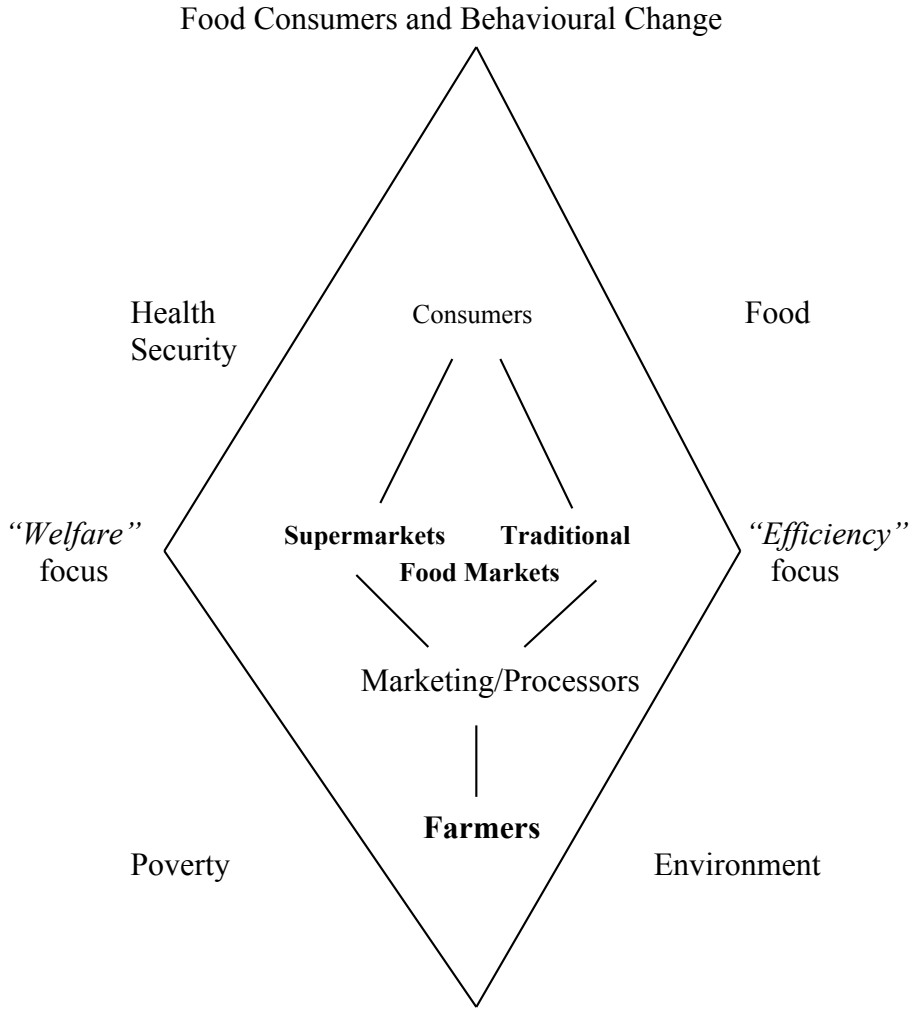
3. *Try to make corporations more socially responsive*. But be careful what you wish for. R. J. Reynolds now advertises itself as a "health company", with information on its website on how to keep children from smoking and how to help adults quit. Wal-Mart's "associates" (workers, in any other company) believe in community action and actively volunteer their time for local causes, according to their advertising campaign. The multinational banks (including the World Bank) can afford to "love us to death" with NGO advisory panels and local participation in their development projects.

As an economist, I put a lot more of my trust in competition and market forces to bring about higher standards of living than I do in unregulated corporate efforts to do good works. In particular, individual corporate efforts to "internalize" environmental, health and social (distributional) costs that are currently external to market prices bring no guarantee that they will actually improve overall social welfare. If societies genuinely want these costs internalized, the democratic process and consumer sovereignty offer mechanisms to do so.

Finally, it is useful to think through what an integrated food policy framework would look like, even roughly, in an effort to move the research agenda forward. Figure 4 illustrates the likely components. It is organized around the familiar vertical structure of the food system, with farmers at the bottom, passing their produce up through the marketing system – now divided into traditional markets and supermarkets – with consumers at the top of the chain.

[5] See the DAI/BIDE research studies on "pro-poor growth" financed by USAID (2004).

Figure 4: An Integration of the Food Policy Paradigms



The four major policy issues confronting the food system are arrayed in a diamond around this vertical structure: health and poverty concerns on the "welfare" side and food security and environmental concerns on the "efficiency" side of the diamond. From below, the basic forces affecting small farmers are the structural transformation and the role of agriculture in that process. From above, the basic forces affecting food consumers are behavioural changes in the context of increasing affluence and choices available.

Within this framework, it is possible to identify the key linkages from supermarkets through the rest of the food system that policy-makers will want to understand if they are concerned about food security. At the micro, or household level, the issue is impact of supermarkets on poor consumers, especially the role of supermarkets in distribution of starchy staples. There has been remarkably little research on this aspect of the impact of supermarkets on food security.

At the macro level, the issue will be the impact of supermarkets on staple food supplies, price stability and links to global grain markets. What role are supermarkets playing in these markets at the moment? Is there any way to use supermarkets (instead of parastatals, for example) to manage "macro" food security by being the intermediary between a country's consumers and the world grain markets?

The last issue asks whether supermarkets are a major factor in the health epidemic seen in affluent countries and among the affluent in poor countries. Are processed foods, snack foods and fatty foods, the cause of obesity, heart disease and diabetes? Are supermarkets to blame for our rapidly rising consumption of these foods?

Taken together, these questions form the core of a research agenda that is complementary to the current attention focusing on the impact of supermarkets on small farmers, and research directed at finding policy and/or programme mechanisms to help them compete successfully within the global supply chain. In combination, the consumer-oriented and the producer-oriented research, linked as they are by the rapid emergence of supermarkets as the dominant players in the food marketing arena, fit comfortably within the expanded food policy paradigm discussed at the Workshop.

References

Chaudhri, R. & Timmer, C.P. 1985. *The impact of changing affluence on diets and demand patterns for agricultural commodities*. Staff Working Paper No. 785. Washington DC, World Bank.

Easterly, W. 2003. *Inequality Does Retard Economic Growth*. Center for Global Development Working Paper. Washington DC, Center for Global Development.

Eicher, C. & Staatz, J. 1998. *Agricultural Development in the Third World.* Baltimore, Johns Hopkins University Press.

Krugman, P. 1993. *Geography and Trade*. New York, Norton.

Jones, E.L. 1981. *The European Miracle: Environments, Economics and Geopolitics in the History of Europe and Asia.* Cambridge, UK, Cambridge University Press.

Jones, E.L. 1988. *Growth Recurring: Economic Change in World History*. Oxford, UK, Clarendon Press.

Maxwell, S. & Slater, R., eds. 2003. *Dev. Pol. Rev.*, 21(5–6): 531–553. (Special double issue on Food Policy Old and New.)

Pingali, P.L. & Rosegrant, M.W. 1995. Agricultural Commercialization and Diversification: Processes and Policies. *Food Policy*, 20(3): 171–185.

Reardon, T. & Berdeque, J.A., eds. 2002. Supermarkets and Agrifood Systems: Latin American Challenges. *Dev. Pol. Rev.,* 20, (4) (Theme Issue).

Reardon, T., Timmer, C.P., Barrett, C.B. & Berdegue, J.A. 2003. The Rise of Supermarkets in Africa, Asia and Latin America. *Amer. Jour. of Agri. Econ.,* 85 (5): 1140–46.

Timmer, C.P. 1981. Is There 'Curvature' in the Slutsky Matrix? *Review of Econ. and Stat.*, 62(3): 395–402.

Timmer, C.P. 1988. The Agricultural Transformation. *In* H. Chenery & T. N. Srinivasan, eds., *Handbook of Development Economics*. Vol. 1. Amsterdam, North-Holland.

Timmer, C.P. 1997. Farmers and markets: The political economy of new paradigms. *Amer. Journal of Agri. Econ*., 79(2): 621–27.

Timmer, C.P. 2002. Agriculture and Economic Growth. *In* B. Gardner & G. Rausser, eds., *The Handbook of Agricultural Economics.* Vol. II, pp. 1487–1546. Amsterdam, North-Holland.

Timmer, C.P. 2003. *Agriculture and Pro-Poor Growth*. Prepared for the USAID project on pro-poor strategies for economic growth. Bethesda, MD, Development Alternatives, Inc. (DAI).

Timmer, C.P., Falcon, W.P. & Pearson, S.R. 1983. *Food Policy Analysis.* Baltimore, Johns Hopkins University Press (for the World Bank).

United States Agency for International Development (USAID). 2004. *Project on Pro-Poor Strategies for Economic Growth*. Implemented by Development Alternatives, Inc. (DAI) and Boston Institute for Development Economics (BIDE). Bethesda, MD.