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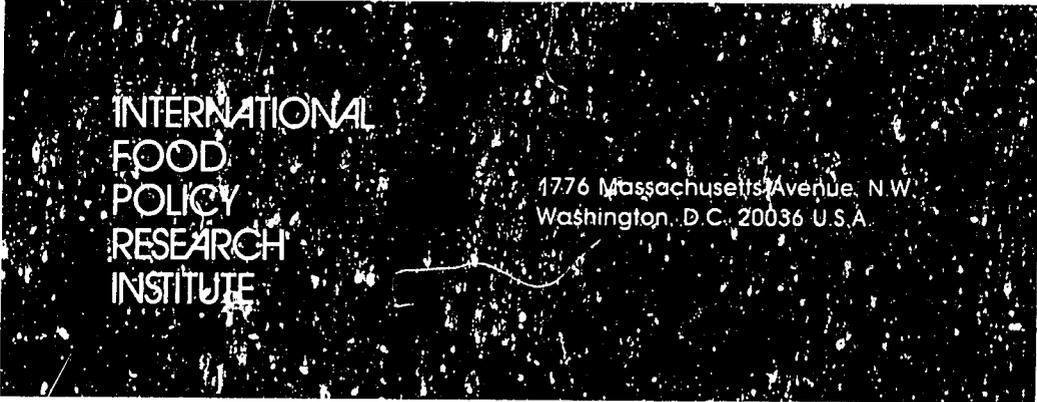
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# The Emerging Role of International Food Policy Research

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## The Emerging Role of International Food Policy Research

by Joachim von Braun\*

### Introduction

The main objective of international agricultural research is to identify efficient and effective solutions to world hunger. More precisely, the stated goal of the Consultative Group on International Agricultural Research (CGIAR) is:

„(through international agricultural research and related activities) to contribute to increasing sustainable food production in developing countries in such a way that the nutritional level and general economic well-being of low-income people are improved“ (CGIAR 1987, p. xvi).

The complex and multifaceted goal is conceptually divided into several interdependent objectives that reflect the primary areas of research and related activities required for the reduction and diminution of hunger and poverty. Food policy research (FPR) ranks high among these objectives by:

- „promoting better human health and economic well-being through improved nutritional quality of foods, enhanced equity in access to foods, expanded economic opportunities, and better management of overall family resources“;
- „improving the policy environment to ensure the formulation of rational agricultural and food policies which favour increases in food production and commodity productivity“ (CGIAR 1987, pp. xvi, xvii).

The experience of the 1970s and 1980s, when food supply expanded through new research-based technology, provides evidence that increased supply is only a necessary but not sufficient condition for the effective reduction of world hunger, thus giving impetus to the evolution of food policy research as a crucial component in the international agricultural research system.

In principle, FPR works along lines familiar in the plant-breeding research carried out by international agricultural centers, such as fighting stress or disease and testing and adoption of new material. However, instead of stress-resistant new plant material, FPR breeds ideas to cure „diseases“ in food policies; instead of testing new varieties in test plots, FPR requires that empirical analyses be repeated in different economic and policy environments; instead of assisting in the adoption of new technology, FPR plays a role in the adoption of new policies by identifying the steps leading to policy changes and the consequences of such changes.

The tasks of this paper are to:

- assess functions and contributions of food policy research; and

- identify the emerging role of food policy research in international agricultural research (IAR).

Recent examples of food policy research on food price and subsidy policies carried out at the International Food Policy Research Institute (IFPRI), in collaboration with national institutions, are used to describe the potentials and constraints of that role. The focus of this article is on IFPRI for explanatory purposes and does not reflect neglect of the great body of other national and international institutions actively pursuing food policy research today, many of which IFPRI is actually cooperating with.

## 1. Functions and Priorities

There are two distinct levels at which FPR may be viewed in the context of IAR. First is the centrality of FPR in the guidance of development strategy in countries where food is the major consumer good and where agriculture's role in income and employment is large (*Mellor* 1986). The interaction and continuous feedback between FPR and the assessment of technology development in the context of the economic, social, and political environments of a developing country or region is essential. Second, FPR deals with existing food policies in order to identify realizable policy options that will better achieve (that is more cost-effective) stated goals and to avoid adoption of policies that prove ineffective. FPR is therefore geared toward reducing costs and increasing benefits of actual or considered policy changes, and it has to be carried out in close collaboration with policy-formulating institutions. But it should be kept in mind that FPR must provide a perspective for long-term alternatives and not be seen simply as an evaluation exercise or even as a service to inherently inefficient institutions or political systems that resist change in areas necessary for long-term economic development. There is a great need for research on understanding processes as a basis for policy analysis, not just status quo analysis.

FPR functions are thus:

- to analyze and explain food economy and policy in the context of development;
- to help analyze and quantify the effects of current and alternative policies on social objectives (this function should include the development of innovative instruments for policy interventions);
- to forecast at varying degrees of specificity and generality, depending on the food policy issue in question.

It is now widely recognized that there is only a weak relationship between the quantity of food available on an aggregate basis at the national level and the nutritional status of the population, particularly among the poor. Just as national per capita income is a poor indicator of the prevalence of absolute poverty, so is per capita food consumption which is a poor indicator of the number of people consuming inadequate amounts of food (*World Bank* 1986). Low-income countries of similar per capita food supply have differing shares of population consuming inadequate amounts of food largely because of differences in distribution of income. Clearly, increased availability, which results in lower food prices, benefits the poor in particular because their demand for food increases more with lower prices than that of other income groups. As *Alderman*

(1986) shows on the basis of a large number of price elasticity estimates from different low-income countries, a 10 percent increase in income will lead to a 1 to 3 percent decline in the compensated price elasticity when elasticities range between  $-0.5$  and  $-1.5$ . The poor are thus more price responsive. The price-reducing effect of increased supply is usually not sufficient to substantially alleviate the inability of the poorest 20 to 30 percent to meet their food needs. Employment and income of the poor must expand to effectively reduce their insufficient food consumption. The demand of the poor for food is fairly income-elastic. This is reflected in the high calorie elasticities for low-income families (Table 1).

FPR attempts to contribute to achieve the nutritional objective through research on generation of income and employment growth. This includes research on the effects of economic policies on poverty alleviation, specifically on the relationship between income earning and food consumption and nutrition and health.

Table 1: Calorie elasticities for low-income families<sup>a</sup> in rural areas

Country	Elasticity
Bangladesh	0.40
Sri Lanka	0.60
Thailand	0.29
Indonesia	0.61
Malaysia	0.65
Egypt	0.34
Sudan	0.33
Brazil	0.23

Source: Harold Alderman (1986, p. 37).

<sup>a</sup> Low income is defined as the average income of families that consume 1,750–2,000 calories per capita per day.

One main function of FPR in the context of IAR is determined by the consequences of technological change for farm producers and consumers, and the poor in particular. A simple graph describing changes in the food market highlights the issues (Figure 1). In the framework of research-driven technological change that shifts the supply curve of food, the related food policy issues analyzed are (a) the nature, extent, and potential enhancement of the supply shift (in Figure 1, say  $S, S^*$ ), (b) the implications for effective demand due to price effects (in Figure 1, say  $Q_1, Q_2$ ), and the implications of market surplus and trade in an open-economy setting ( $Q_1, Q_3$ ), and (c) the potential for the expansion of demand beyond price effects along with the maintenance of production incentives during the dynamic supply expansion, in order to rapidly achieve the consumption and nutrition goals of agricultural research ( $D, D^*$ ).

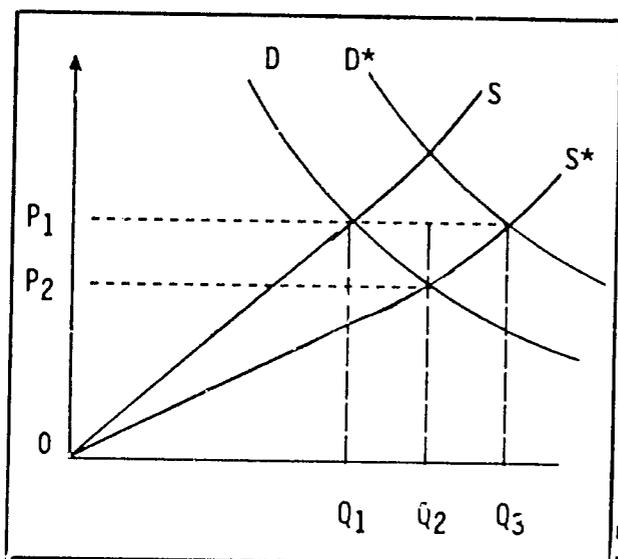


Figure 1: Food Market – Food policy research issues and technological change

Of course, in a static framework, as in Figure 1, only some broad issues can be addressed. The complex aspects of dynamic change in supply and demand, production variability, income instability and distribution, and the related food security issues at the country and household level, are noteworthy examples that require a dynamic framework of discussion (Sahn, *vo.1 Braun* 1987).

Both FPR and technology-oriented research have to set priorities. No comprehensive list of FPR issues will be drawn up here. The Technical Advisory Committee (TAC) to the CGIAR lists as some major policy issues:

- the relative emphasis to be placed on industry and agriculture as areas of investment to stimulate economic development;
- the balance nations strike between the goal of food self-sufficiency and reliance on food imports to meet demand;
- the determination of national priorities among export and food crops within the context of a country's comparative advantage, the dynamics of the international markets, and need for foreign exchange;
- the reconciliation of the need to keep food prices low for consumers with that to provide sufficient incentives to farmers to expand production;
- the degree to which pricing policies or subsidies should be used to stimulate production and the adoption of improved technologies;
- the impact of differential wages and employment opportunities in the rural and urban sectors on the viability of the agricultural sector; and
- the equitable distribution of benefits of agricultural research and increased food productivity among various sectors and interest groups in the society (CGIAR 1987, p. 17).

The frequently sensitive issues that FPR deals with, may often put the researcher in a precarious position. This is particularly true when options presented as solutions to a policy problem involve the conflict between high economic net benefits and high,

short-term political risks (costs). Food price and subsidy research is a case in point, because even though alternatives to subsidies, for example, may be economically beneficial, the political risks are frequently considered to be high by policymakers. As new knowledge on the workings of economies is usually specialized and technical in nature, „the influence of an economist’s work and the popular (non-professional) esteem in which he is held are most likely to be negatively correlated“ (Stigler 1982, p. 67). Evaluation of the payoffs of FPR is therefore complex and does not lend itself to short-term quantitative approaches. However, as the results of investment into FPR emerge, the chance for ex-post evaluation of returns to investment in FPR develops. This may only be occasionally possible in a rigorous framework such as the one used to examine the cost and returns of agricultural research that enhances technological change which is not without its problems either (Ruttan 1982). Attempts that identify (ex post) high payoff FPR could, however, prove useful for future priority setting.

## 2. Evolution of Food Policy Research in the CGIAR System

The insight that total factor productivity in agriculture would have to be substantially enhanced in order not to constrain economic development was important in the demand for technological change in food production in Europe in the second half of the last century (Grigg 1984) and in Japan in the early decades of this century (Akino and Hayami 1975).

In the early stages of the evolution of the international agricultural research system (CGIAR) in the 1960s, an important function to be played by a food policy research institute was „... to keep the global food and agricultural situation under independent review, to select key policy issues for analysis, and to identify research needs that bore on world food production and use“ (Baum 1986, p. 127). This understanding was based on the changing notion about the ability of small farmers to respond efficiently to innovation (Schultz 1964), and the key role played by agricultural development in economic development, in particular the role of growth in food production (Mellor 1966). It took some time, however, to move from identification of the role of FPR to actual implementation within the CGIAR, which occurred with the foundation of the International Food Policy Research Institute (IFPRI) in 1975 and its inclusion into the CGIAR in 1979 and with the sizeable number of social science researchers doing policy research in some of the CGIAR centers.

This is not to say, however, that FPR was not expanding rapidly outside the CGIAR System in the 1960s and 1970s. But with the benefit of hindsight, it is apparent that both the optimism of solving the problems of world hunger mainly through output expansion and the pessimism of much of the misleading early conclusions about the distributional consequences of the „green revolution“ in Asia might have been rationalized with more timely expansion of investment in related FPR. In Sub-Saharan Africa since the 1980s, FPR has moved more in conjunction with the technology research undertaken by the international agricultural research system. It remains to be seen to what extent this interaction produces effective and efficient solutions to the food problems of Africa with its complex ecological and socioeconomic environment; this will in fact provide an interesting case for the study of FPR in overall agricultural and economic

development. At this stage the key role that FPR is to play in Africa within IAR is in the identification of policy priorities (*Mellor, Delgado, and Blackie* 1986). The challenge is to identify policy priorities in the highly diverse regions of Africa, particularly in its farming systems, the socioeconomic fabric of which is yet to be fully understood. Much of the rapidly expanding FPR in Africa is therefore micro-based and involves extensive primary data collection. IFPRI, for instance, allocates now about 44 percent of its research staff resources to Sub-Saharan Africa (during 1988 – 92). The Institute was involved in the mid-1980s in executing research projects, in collaboration with national institutions, that entail primary household data collection in seven African countries (Burkina Faso, The Gambia, Kenya, Rwanda, Zaire, Zambia, Zimbabwe).

Food policy research in the CGIAR is undertaken by the technology oriented centers and by IFPRI, which is the lead center for policy research in the system. The centers other than IFPRI mostly focus on their mandate crops or regions. It is noteworthy that less than one third of the total social science staff of the CGIAR system is in IFPRI. The social science research in the other centers is primarily focused on the generation and diffusion of new technology based on improved understanding of the technological and economic circumstances of the producer, the use of this information to guide the development of new technology, the estimation of the payoff to alternative research strategies, the collaboration on trials in research stations and farms, and the documentation of the adoption and consequences of new technology (*Anderson* 1985, vol. III). While the international agricultural research centers concentrate their research on expanded output and improved quality of food crops, FPR includes research on typical nonfood cash crops, their role in the economy, their interaction with food crops at the micro level, and their effect on the poor's nutrition. Such research at IFPRI includes studies in progress on the effects of commercialization of traditional agriculture on income, consumption, and nutrition, for instance, related to sugarcane in the Philippines and Kenya, tea in Rwanda, and nontraditional vegetables for export in Guatemala.

### 3. Food Policy Research at IFPRI

IFPRI's mandate is to identify and analyze alternative national and international strategies and policies for meeting the food needs of the developing world.<sup>1</sup> Its research is geared to the policy goal of reducing hunger and malnutrition, particularly in low-income countries and among the poorer groups within those countries. The factors involved are varied and complex, requiring analysis of strategic, technological, and socioeconomic considerations involved in food policy formulation. IFPRI's research program therefore reflects worldwide interaction with policymakers, administrators, and analysts concerned with improving the policy environment for increased food production and the equitable distribution of its benefits in developing countries.

IFPRI's membership in the CGIAR reflects the reality that the policy environment within which the agricultural sector operates can critically affect its capacity to utilize improved technologies, increase productivity and transmission of benefits to the poor, thereby fulfilling a necessary condition for enhancing the nutritional status of

the poor in developing countries. Creation of a policy environment conducive to accelerating food production and ensuring its more equitable distribution is therefore key to achieving the central goal of the CGIAR System. In this context, policy research complements the work of the international agricultural research centers engaged in technology development by providing analysis of policy variables that enhance or constrain the generation and diffusion of technology and help or hinder access to its benefits.

IFPRI takes as its primary task development of the knowledge base required for effective food policy decisionmaking. The range of its research is defined by the scope of the food problem itself. This extends from analysis of macroeconomic considerations at the level of development strategy and their impact on resource allocation in the economy as a whole, to microeconomic analysis of intrahousehold patterns of food consumption and nutrition.

IFPRI's research program is premised on the understanding that, although accelerated growth in agricultural production based on technological change is essential to stimulate growth in most developing countries, it is neither easy to achieve nor sufficient for alleviating poverty and malnutrition. If technological advances in the agricultural production sciences are to realize their potential, there must be awareness of the policy options and means available for modernizing agriculture, of the links between agricultural growth and growth in other sectors, and of alternative means to ensure that increased supplies of food meet the needs of the poor. Accordingly, in setting its research priorities the Institute's resources are allocated to areas of policy research that promise to elucidate the complex and often dynamic interrelationships between technology, growth, and human nutrition.

At present, five such areas are of central importance to setting IFPRI's research agenda: (1) development strategy, addressing issues of macroeconomic significance that have a bearing on the pivotal role of food and agriculture in the development process; (2) technology policy, reflecting the essential function of technological change in accelerating agricultural growth; (3) poverty alleviation, emphasizing IFPRI's mandated concern with the food consumption and nutritional status of low-income people and the critical importance of income generation to improving that status; (4) Africa, denoting the urgent, complex, and long-term nature of food problems in this region, the decisive role of food policy in alleviating them, and IFPRI's capacity to bring a global comparative analysis to bear in this context; and (5) food aid, reflecting IFPRI's concern with the massive net flows of food from developed to developing countries, the importance of increased food consumption to short-run mitigation of hunger, and the crucial wage-goods role of food in infrastructure development and agricultural growth.

At the current stage of its development IFPRI places a premium on forging collaborative links with Third World research institutions. Many developing countries have a deficient institutional capacity to analyze food policy issues and develop appropriate policy responses. Accordingly, IFPRI works to strengthen their research capacities by augmenting and improving the cadre of professional food policy analysts whose knowledge and skills are critical to achieving the policy goal of accelerated growth with equity. This is accomplished through direct participation by developing country professionals in collaborative research both at IFPRI headquarters and in the field. A table in the annex lists such current collaborative activities of IFPRI by regions.

IFPRI disseminates its research findings to a wide public, in particular to administrators and policymakers who influence national and international food policy. This is accomplished through direct working relationships with key public figures, publication of research results, and convening of national and international conferences, seminars, and workshops with policymakers. In addition, the Institute maintains a global network of food policy analysts who provide advice for policy formulation efforts in a broad range of countries.

#### 4. Building Generalizations on Specific Research

FPR generates new knowledge about the effects of current and alternative policies, and this knowledge has its effect on current policies. Usually it is not just an isolated research project that can claim to have a major effect on policy but it is more the flow of research results on an issue reinforcing each other. A certain critical mass of empirically-based research evidence is required. To have an effect, policy research requires policy responses from policymakers, be it as action or as reconsideration of planned action. Policymakers, like farmers, are not likely to be risk takers. To be convincing, therefore, policy research, like testing new plant material, has to be repetitive in different environments to a certain extent. A systematic approach to case studies that permits integrative analysis across cases studied is essential. Furthermore, research is to be adapted to a specific socioeconomic and policy environment if more basic FPR is to have an impact. Finding the proper balance between specificity and generalizability remains a constant challenge.

The capacity to perform the „adaptive“ research on a food policy issue in a particular country based on conceptualization and methodology developed in other country case studies, is the main task for institution building. The international agricultural research centers can and do play a role in this aspect through collaboration on research projects. Upgrading capacities in FPR of national institutions, however, also requires basic training of staff on a large scale. Universities have a comparative advantage in this.

In the following example, a food policy research undertaking is briefly reviewed to exemplify the mode of policy research in the international agricultural research system. The example, research on food subsidies, is picked out of the broad list of ongoing research activities at IFPRI. It is selected to provide some practical evidence for general discussion of the role of FPR in the CGIAR. In general, IFPRI's role ranges between a coordinating or catalytic role and a leading role in conceptualization and execution of research. The example presented here is more of the latter type. It should be stressed, however, that it is only through intensive interaction with researchers and institutions outside of the CGIAR in developing and industrialized countries that the FPR within the CGIAR is actually able to have its significant impact.

##### **Example: IFPRI Research on Food Subsidies**

Governments of many developing countries attempt to keep food prices low to maintain low urban wages, to assure social and political stability, to raise the real purchasing power of all or certain groups of consumers, and to reduce or eliminate nutritional

deficiencies in low-income consumer groups. However, low food prices provide disincentives to farmers, reduce the rate of adoption of modern technology, and decrease incomes of many of the rural poor.

Some governments have dealt with the desire for low consumer prices and the need for sufficiently high producer prices to assure productive incentive by providing explicit food price subsidies. Others have downplayed the effect of low producer prices on food production and maintained low prices to both producers and consumers.

Food prices play an important role in the well-being of the poor including their ability to meet nutrition requirements; efforts to assure that the poor have access to sufficient food cannot ignore government price and subsidy policy.

Food subsidy policies and their implementation procedures vary widely among countries and include explicit price subsidies or food stamps targeted to selected population groups and/or food commodities, as well as explicit or implicit general price subsidies and food-related transfers with little or no targeting.

In some countries, consumer-oriented food subsidies place a heavy financial burden on either the government or food producers while in others, subsidy costs are of little consequence to the government and/or farmers. In the 1980s food subsidies were reduced in some countries, such as Bangladesh, Brazil, Pakistan, and Sri Lanka, while maintaining a relatively high level in others (Table 2). Similarly, the benefits from food subsidies and their distribution as well as the cost-effectiveness vary greatly among countries. The major orientations of subsidy systems vary as much as the levels and structures of consumer and producer prices accompanying them in the various countries. An analysis of consumer and producer price structures in a number of countries with subsidy programs in the early 1980s reveals that usually a wedge is effectively placed between the subsidized consumer price and the farmers' sale price (Table 3). The wedge was the largest in those countries that have the most subsidized consumer prices. Some subsidy programs greatly enhance poor people's purchasing power and nutritional status while others primarily benefit middle- and upper-income population groups. In some countries, consumer-oriented food subsidies are of such magnitude that they exercise considerable influence over foreign trade, inflation, and the performance of the agricultural and other sectors as well as economic growth and equity in general. The massive program in Egypt is a case in point.

The processes determining the effects of consumer-oriented food subsidies are complex, and reliable information on the effects of existing policies and programs and changes in these are often available only from relatively complicated analyses. Policy design and modifications based on simplistic reasoning may lead to disappointing results. Food subsidies may, for instance, expand import demand for food and impinge on the exchange rate. The critical role that exchange rate policies play for the growth performance of agricultural sectors in low-income countries is only recently being increasingly researched (Valdes and Siamwalla 1987).

Because of the widespread occurrence of consumer-oriented food subsidies in developing countries, their large magnitude in some of these countries, and the importance of this matter within the overall goal of the CGIAR to improve access among the poor to sufficient food, IFPRI has undertaken research aimed at assisting policymakers in estimating the effects of existing subsidies and predicting the effects of policy changes.

**Table 2: Government expenditures on explicit food subsidies, 1980 – 1985 (percent of total government expenditures)**

Country	1980	1985
Bangladesh	5.7	3.8
Brazil	5.6	1.7
India	3.5	2.2
Egypt	16.4	15.0
Morocco	5.0	7.9
Pakistan	7.9	4.1
Sri Lanka	7.2	2.8

Source: *Per Pinstrup-Andersen and Mauricio Jaramillo, "Government Expenditures on Explicit Food Subsidies in Selected Countries, 1980 – 85"* (Washington, D.C.: International Food Policy Research Institute, 1986), mimeographed

**Table 3: Price structure of the major cereal crop in selected countries with consumer-oriented food subsidies**

Country	Period (Averages)	Major Commodity	Producer Price in Percent of		
			Equivalent International Price <sup>a</sup>	Subsidized Consumer Price	Subsidized Consumer Price in Percent of Equivalent International Price <sup>a</sup>
Sri Lanka	1977–80	Rice	83	151	55
Bangladesh	1977–78	Rice	78	150	52
Pakistan	1976–81	Wheat	88	115	77
Thailand	1978–80	Rice	65	100	65
Egypt	1978–80	Wheat	57	161	35
Zambia	1977–79	Maize	85	125	68
Brazil	1977–81	Wheat	100	312	32
Mexico	1978–81	Maize	116	139	83

Source: *Joachim von Braun, "Implications of Consumer-Oriented Food Subsidies for Domestic Agriculture,"* in *Per Pinstrup-Andersen (ed.), Consumer-Oriented Food Subsidies* (Baltimore: Johns Hopkins University Press, forthcoming).;

<sup>a</sup>The international price is adjusted for exchange rate overvaluations in the respective countries.

Studies were done in collaboration with national institutions and individuals in a dozen countries of Africa, Asia, and Latin America. The study countries are Bangladesh, Brazil, Colombia, Egypt, India, Mexico, Pakistan, the Philippines, Sri Lanka, Sudan, Thailand, and Zambia.

The first major study in this context was undertaken by IFPRI on Egypt. With a population of 50 million and a food subsidy bill of more than U.S. \$ 1.5 billion, Egypt has one of the largest food subsidy systems in the world. The system has afforded even the poorest Egyptians with higher food consumption than is usually found in the Third World, but at staggering costs. Pressures to reduce fiscal costs of this system were mounting, however, eliminating it without simultaneous changes in other policies could have adverse effects on the poor at least in the short run.

IFPRI designed and implemented a research project to gain a better understanding of this subsidy scheme and how changes would affect the poor as well as fiscal costs, agricultural production and incomes, inflation, and other aspects of economic growth and equity. It had four important results.<sup>2</sup>

First, the project involved the development of a multidisciplinary approach incorporating economics, nutrition, and anthropology and applied it to this complex problem. This methodology was later used in Sri Lanka and the Philippines and is currently being applied in Pakistan.

Second, the initiation and work on this project was conducted in conjunction with Egyptian researchers and policymakers. Collaboration occurred in designing the questionnaires for a countrywide rural and urban survey and continued through the analysis and dissemination phases of the project. This interaction culminated in a series of meetings at the ministerial level in Cairo in August 1983 and February 1984. Because the work went beyond the accounting of the fiscal costs of the food subsidy system in Egypt, the meetings greatly contributed to the discussion of food price policy options.

Third, it developed the knowledge to assist the Egyptian government in reducing the growth of the food subsidy budget and in scaling down cost without negatively affecting the poor. The research showed the implications of selecting various policy options. During the year after the results were first made available, expenditures were actually decreased by phasing out the subsidy on certain commodities that are consumed more by middle- and higher-income consumers, such as meat, refined wheat flour, and bread from such flour, and by restructuring the system of ration distribution for upper-income groups through the introduction of a second type of ration cards for a higher-income group, identified by asset ownership, giving reduced access to subsidized food.

Fourth, together with IFPRI research on food subsidies in other countries, including Bangladesh, Brazil, India, Sri Lanka, Mexico, Colombia, the Philippines, Zambia, and Sudan, this project made a significant contribution to the overall knowledge and understanding of how governments in developing countries can most efficiently deal

with food price policies in an environment of growing government deficits and foreign debt.<sup>3</sup> In specific meetings in Middle East countries (Morocco, Syria), the results from the Egypt research were presented upon request of these governments at high levels as these countries cope with very similar problems of food subsidy systems.

## 5. Conclusions and some Future Directions

The demand for international food policy research has increased in recent years. This is probably a consequence of the recognition of the importance of the response of developing countries in terms of domestic policy to new situations in the international food markets and in the macroeconomic environment. Long-term outlooks of international developments, especially of prices, are key parameters needed for sound domestic policy response.

International food policy research provides a basis for improved understanding of the changing relationships between international development and its effects on developing countries. Accordingly the Technical Advisory Committee to the CGIAR suggests that policy research in the international research system should emphasize issues of transnational importance and suggests the following future activities:

- "the defining of policies which stimulate increased food production, and stimulate income growth and employment for the rural poor;
- "the analysis of the effects of agricultural and food policies on various types of agricultural production units and their respective capacities to integrate technological change for increased productivity;
- "the exploration of suitable responses to the rapid growth of the developing-country demand for imported food;
- "the investigation of means to develop food security for the world's poorest countries and people;
- "the analysis of the effects of agricultural and food policies on other sectors of the economy and the implications for rural and national development; and
- "the exploration of the means for international cooperation in food trade and aid" (CGIAR 1987, p. 66).

The ability of developing country institutions to apply such analyses to their own economies requires upgrading. This is probably best achieved in interaction between developing country analysts and CGIAR researchers on joint research projects.

Investment in hard and soft infrastructure plays a critical role for the increased market-integration of agriculture and for the spread of new agricultural technology.

The more traditional agriculture becomes market-integrated and specialized, as is the current case in Africa, the more costly do policy failures become at the sectoral and macroeconomic levels. Comprehensive information about the economic and technical relationships is also required at the farm and household (micro) level as a basis for FPR. It is at this level where, through provision of new information and facts on functional relationships, in-depth FPR has most frequently challenged "conventional

wisdom." A recent example of this in IFPRI research work is the role of rice consumption for the urban poor in Sahel countries, which turns out to be much more significant than previously assumed (*Delgado and Reardon 1987*).

International food policy research within the CGIAR has as its objectives not only to expand the supply of knowledge but also to assist in relating the supply of existing knowledge in industrialized and developing countries to the demand from international institutions, aid agencies, and primarily governments and their advisers in LDCs. In order to be effective, this requires cooperation and networking among research institutions and individual researchers to a large extent. Institutions involved in food policy research have an important role in assuring the effective matching of supply of and demand for policy research and -- particularly in cooperation with small developing countries -- even in articulating the demand for food policy research.

## Summary

The main objective of international agricultural research is to identify efficient and effective solutions to world hunger. Food policy research now ranks high among the instruments of the Consultative Group on International Agricultural Research to contribute to achieving this main objective. The paper assesses the functions and contributions of food policy research and identifies the emerging role of food policy research in international agricultural research. In describing the research process, emphasis is placed on collaborative research with institutions in low-income countries. Examples of ongoing research at the International Food Policy Research Institute are used to highlight this point. Different users of policy research demand different levels of generalization of results. Generalization of food policy research is to be based on specific research to achieve impact. A critical mass of specific research -- repeated in different countries or regions with different socioeconomic and policy environments -- is required to obtain a reliable basis for this bottom-up approach to generalization. This approach is exemplified with the case of research on consumer-oriented food subsidy policies recently undertaken at IFPRI.

## Zusammenfassung

Das Hauptziel der internationalen Agrarforschung ist es, effiziente und effektive Lösungen zum Problem des Hungers in der Welt zu finden. Agrar- und Ernährungspolitische Forschung rangiert inzwischen mit hoher Priorität unter den Instrumenten der 'Consultative Group on International Agricultural Research', mit denen dieses Hauptziel angestrebt wird.

Dieser Artikel befaßt sich mit den Funktionen und der wachsenden Rolle von internationaler Agrar- und Ernährungspolitischer Forschung. Die Bedeutung von Forschungs-

kooperation mit Institutionen in Entwicklungsländern in der Anlage und Durchführung von Vorhaben wird betont und mit Beispielen aus der Arbeit des International Food Policy Research Institute (IFPRI) verdeutlicht.

Die verschiedenen potentiellen Nutzer von Agrar- und Ernährungspolitischen Analysen fragen Forschungsergebnisse unterschiedlichen Grades von Verallgemeinerungen ab. Verallgemeinerung von Ergebnissen muß auf detaillierter spezifischer Forschung aufbauen, um Umsetzung in politisches Handeln zu bewirken. Punktuelle einzelne Studien sind in ihrer Wirkung aber begrenzt. Erst eine gewisse kritische Masse spezifischer Detailstudien zu einem Problembereich, durchgeführt in Ländern oder Regionen mit unterschiedlichem sozioökonomischen und politischem Umfeld, bilden die Bausteine für dieses Vorgehen der Verallgemeinerung „von unten nach oben“. Dazu müssen Fallstudien vergleichbar angelegt sein. Diese Vorgehensweise wird am Beispiel eines kürzlich von IFPRI durchgeführten Forschungsvorhabens verdeutlicht, das sich mit konsumentenorientierter Nahrungssubvention in einer Reihe von Entwicklungsländern befaßte.

\*I am indebted to Robert Herdt, International Food Policy Research Institute/The Rockefeller Foundation, and to John W. Mellor for a critical review of an earlier draft.

## Notes

<sup>1</sup> This section draws on IFPRI's medium term program and budget plan, 1988 – 1992 (September 1987).

<sup>2</sup> The results of the Egypt research are presented in a number of IFPRI research reports and summarized in *Alderman and von Braun* (1986).

<sup>3</sup> These findings are comprehensively put together in a forthcoming book edited by *Per Pinstrup-Andersen* (1988).

**ANNEX**  
**Collaborative research of IFPRI with institutions in  
developing countries in 1986, by regions**

Region/Country	Institution	Research On .....
<b>AFRICA</b>		
Burkina Faso	Centre d'Etudes, de Documentation, de Recherche Economique et Sociale (CEDRES)	Substitutions in consumption of wheat and rice for traditionally grown millet and sorghum and the substitution in production of maize and rice.
Côte d'Ivoire	Centre Ivoirien de Recherches Economiques et Sociales (CIRES)	Substitution in consumption of wheat and rice for traditionally grown millet and sorghum and the substitution in production of maize and rice.
Gambia	Programming, Planning, and Monitoring Unit for the Agricultural Sector (PPMU)	Implications for economic and nutrition-related programs and policy of increased commercialization of semisubsistence agriculture in Gambia.
Kenya	Kenyatta University and the National Council for Science and Technology	Effects on food consumption and nutrition of shifts from semisubsistence maize to commercialized sugarcane production in Kenya.
Nigeria	University of Ibadan	Incidence of trade and exchange rate policies on production incentives, growth, and employment in agriculture; and analysis of the past trends and prospects for future use of cassava as food.
Rwanda	Ministry of Agriculture	Implications for economic and nutrition-related programs and policy of increased commercialization of semisubsistence agriculture.
	National University of Rwanda	Policy issues for long-term growth in fertilizer use.
Senegal	Institut Sénégalais de Recherches Agricoles	Substitution in consumption of wheat and rice for traditionally grown millet and sorghum and the substitution in production of maize and rice.
Zaire	Ministry of Agriculture	Policy issues for long-term growth in fertilizer use; and analysis of the past trends and prospects for future use of cassava as food.
	University of Kinshasa	

Region/Country	Institution	Research On .....
Zambia	Eastern Province Agricultural Development Project	Effects of technological change in agriculture on rural welfare and the impact of rural infrastructure on agricultural development.
	National Food and Nutrition Commission Rural Development Studies Bureau, University of Zambia	Effects of technological change in agriculture on rural welfare and research on the food consumption and nutrition implications of maize price and marketing policies
Zimbabwe	Department of Physical Planning, Ministry of Urban and Rural Development and Local Government	Effect of the provision of service infrastructure on agricultural and rural development in Zimbabwe.
ASIA		
Bangladesh	Bangladesh Institute of Development Studies (BIDS)	Technological diffusion and its effect on agricultural production and economic development.
People's Republic of China	Chinese Academy of Agricultural Sciences (CAAS)	Various aspects of Chinese agriculture, including the agroclimatic delineation of Chinese wheat zones and the variability in Chinese cereal production.
	Chinese Academy of Preventive Medicine	Planning a collaborative workshop on survey and analytic methodologies related to food policy and nutrition.
	Chinese Academy of Sciences (CAS)	Water management policy and agricultural productivity in North China.
India	Centre for Development Studies	Analysis of the past trends and prospects for future use of cassava as food and feed.
	Tamil Nadu Agricultural University	Effects of technological change in agriculture on rural welfare and on the role of marketing and service facilities in rural development.
Indonesia	Badan Urusan Logistik (BULOG)	Analysis of postharvest losses of rice grains in Indonesia.
	Center for Agro-Economic Research	Food demand and supply prospects for Indonesia in relation to agricultural policies and strategies such as irrigation development; and an analysis of the past trends and prospects for future use of cassava as food and feed.

Region/Country	Institution	Research On .....
Nepal	Agricultural projects Services Centre of the Government of Nepal (APROSC)	Ways in which the depletion of forests, which provide wood as cooking fuel, influences time allocation, nutrition, and agricultural productivity.
Pakistan	Applied Economic Research Centre; Centre for Applied Economic Studies; Pakistan Institute of Development Economics; Punjab Economic Research Institute; and University of Baluchistan	Assessment of policies related to food security and human nutrition at the household level in urban and rural areas in Pakistan.
Philippines	Ministry of Agriculture	Nutritional implications of selected food and agricultural policies in the Philippines.
	National Nutrition Council	Pilot study of food price discount programs in the Philippines.
	University of the Philippines, Los Banos	Food demand and supply prospects for the Philippines in relation to agricultural policies and strategies such as irrigation development; and an analysis of the past trends and prospects for future use of cassava as food and feed.
	Xavier University	Food consumption and nutrition effects of the shift from semisubsistence maize to commercialized sugarcane production.
Sri Lanka	Ministry of Plan Implementation	Effect of the food stamp program on the real income, food consumption, and nutritional status of low-income people.
Thailand	Kasetsart University	Equity and income distribution effects of irrigation; and an analysis of the past trends and prospects for future of cassava as food and feed.
	Thailand Development Research Institute	Relationships that exist between and along the growth paths of agriculture and the rest of the economy in Thailand.
	Thammasat University	Equity and income distribution effects of irrigation.
LATIN AMERICA		
Argentina	Fundación Mediterranea	Relationships that exist between and along the growth paths of agriculture and the rest of the economy.

Region/Country	Institution	Research On .....
Brazil	Empresa Brasileira de Pesquisa Agropecuaria (EMBRAPA)	Forces influencing the adoption and diffusion of modern agricultural practices.
	Federal University of Vicosa	Analysis of data collected for the Program of Integrated Rural Development in the Zona de Mata (PRODEMATA).
Chile	Pontificia Universidad Catolica de Chile	Relationships that exist between and along the growth paths of agriculture and the rest of the economy.
Colombia	Agricultural Farmers Association (SAC)	Incidence of trade and exchange rate policies on production incentives, growth, and employment in agriculture.
	Ministry of Planning	Food stamp program.
Costa Rica	Center for the Promotion of Sciences and Socioeconomic Development (PRODESARROLLO);	Agricultural protectionism.
	Central Bank of Costa Rica	
Guatemala	Institute of Nutrition of Central American and Panama (INCAP)	Implications for economic and nutrition-related programs and policy of increased commercialization of semisubsistence agriculture in Guatemala.

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