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Economic Choices for Sustainable Agriculture in Africa

May 6, 1988
(pdf version, August 2000)

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ISBN 0-944572-01-4

Economic Policies for Sustainable Agriculture in Africa

Proceedings of the Second International Conference
Kops Lounge, Montctair State University
Upper Montctair, New Jersey 07043
May 6, 1988

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Keynote Luncheon Speaker:

David McAdams, Division Chief, Southern Africa Region, U.N. Devetopment Programme, New York, New York

About the Center for Economic Research on Africa:
The Center for Economic Research on Africa seeks to foster closer understanding of economic relationships between the United States and Africa. Through its research program, it is concerned with examining the significance and consequences of economic policies within Africa, United States policies toward Africa, and how specific policy alternatives bear on economic relationships between the two regions. The Center operates with financial support from educational, governmental, and business institutions, and works in close collaboration with the Department of Economics, School of Business, Montclair State University, Upper Montclair, Now Jersey 07043.

Acknowledgements: The views expressed by these speakers are their own. They do not necessarily reflect the views of the institutions they represent. Financial and technical support of this publicatin and conference by the following is gratefully acknowledged: The African Development Ban and Fund, Abidjan, Côte d'Ivoire; The African-American studies program, Montclair State University; Office of the Dean, School of Business, Montclair State University; Office of the Dean, School of Humanities and Social Sciences, Montclair State University; The Near East Foundation, New York, New York; S.A. Intercon, Abidjan, Côte d'Ivoire; The World Bank, Washington, D.C.

Introduction

in recent years, few issues have focused world attention on Africa as have food and agriculture. Confronted with weak economic growth, rising international debt, and growing populations at risk of famine and malnutrition, many African countries have engaged in the sometimes difficult process of structural reform. Structural reform in agriculture has been a centerpiece of these efforts.

As African countries embrace new policies to stimulate economic growth, food security has often been a pivotal concern. In the ensuing debate, many countries have adopted policies designed to move their economies toward agricultural self-sufficiency. How effective are these policies? Do they make sense in terms of sustainable development strategy? What alternatives should be considered? To address these questions, the Center for Econonic Research on Africa and the Department of Economics of Montclair State University sponsored a conference on May 6, 1988, assembling a group of experts from a variety of institutions with in-depth knowledge of the policies now unfolding in Africa.

Africa's Historical Experience

During the 1960's, many countries in Africa enjoyed rising levels of per capita income. Along with increases in real income came improvements in education, health, life expectancy, and nutrition. For countries not able to attain agricultural self-sufficiency, food imports were sustained by rising exports and an expanding world economy. Development policies relying on the taxation of agriculture, either directly or through agricultural marketing boards, were based frequently on the goal of accelerated industrialization through the creation of import substitution industries.

With the onset of 1970's, a rising tide of global inflation coupled with an explosion in energy prices, deteriorating terms of trade, and an increase in economic protectionism sent many African countries into severe economic recession. As real per capita incomes fell and international debt mounted, periodic episodes of drought and famine pointed sharply to the need for a re-evaluation of traditional development strategies.

Structural Refom in Africa

Structural reform has served as the focal point of Africa's economic re-assessment. Assisted by bilateral and multilateral financial credit programs, African Leaders have embraced a wide-ranging set of policies designed to stimulate agricultural productivity, improve the performance of domestic industry, restore fiscal balance to government finance, and redress balance of payments deficits. Together, these policies have been designed to restore real growth to African economies.

Stimulating agricultural productivity has involved several types of reform. One has been to reduce or eliminate agricultural marketing boards as they have historically kept real producer prices at such low levels as to discourage domestic production. Flourishing parallel marketing of primary commodities in many economies have provided a clear sign to African governments that artifically Low producer prices represent a Loss of economic income as well as an important source of tax revenue.

As government policymakers have acted to increase producer prices closer to global market Levels,they have also reduced or eliminated costly food subsidies from urban consumers. In some cases, removal of these subsidies has been difficult to accomplish as political stability has frequently depended on the support of an organized minority of urban consumers rather than on the majority of the agrarian population Living in the countryside.

Another structural reform in agriculture has been to adjust foreign exchange rates to levels more consistent with an equilibrium in the balance of payments. Historically overvalued exchange rates have been biased against agriculturaL exporters in favor of urban consumers with high import propensities, contributing much to the aggravation of deficits in batance of payments accounts. Even though it has been sometimes difficult to implement, adopting more realistic exchange rates is a major step toward restoring Africals competitive position in world markets. African leaders have also taken steps to stimulate research and development in agriculture. Investment in drought-resistant crops represents one such initiative. At the same time, while credit is often thought to play an important role, it may be far less important than was once thought. in addition, African countries are turning away from once ambitious Large-scale agriculturaL projects to small-scale programs that hold greater promise of success. Agro-industries are also Likely to play a role in the process of agricultural revitalization, and point to Africals evolving potential as an industrializing region.

For many countries in Africa, national self-sufficiency in agriculture is not an economically viable alternative. While structural reforms that stimulate agricultural productivity represent a move in this direction, if the real costs of production are taken into account, many countries simply do not possess the comparative advantage in the commodities for which they have a demand. For Africa as a whole, however, a greater degree of agriculturaL self-sufficiency than at present is a reasonable economic goal. Steps to promote interregional trade through such organizations as ECOWAS can assist in its realization.

Policy Implications of Agricultural Reform

For sometimes fragile African governments, none of the agricultural policy reforms now being undertaken has been easy to implement. There are measureable social costs in any adjustment program. For many African countries, political stability has been more than a passing concern as potentially major shifts in the distribution of income and wealth occur through structural adjustment. Recognition of the costs of adjustment by the international community, coupled with a judicious reform of agricultural subsidies in Africals traditional export markets, are likely to do much in guaranteeing the success of the reforms on which many African countries have now embarked. International agricultural policy reform, as has now been proposed in the current round of GATT negotiations, is an important first step in raising agricultural competitiveness in Africa, and in laying the basis for sustainable agricultural policies for the future.

Phillip LeBel,
Director, CERAF

Conference Proceedings

Phillip LeBel, Director, CERAF, Department of Economics, Montclair State University

On behalf of the Center for Economic Research on Africa and the Department of Economics, I want to welcome you to today's conference. Sustainable agriculture is an important and acute concern in Africa. We often hear many stories about crop failure, of severe food shortages, and malnutrition. Rather than go through a Litany of somewhat journalistic headlines, we have assembled this morning a panel of experts who have extensive experience with a variety of institutions that have focused on issues relating to agricultural policy in Africa, in particular the issues of adequacy and sustainabitity, and which many governments are wrestling with by way of official policy.

At this point I would Like to introduce our panelists. The individuals you see in your program have been placed here in alphabetical order. That is also the order in which they will make their presentations this morning. On our immediate right is Mr. James Bovard, a fellow at the Cato Institute in Washington, D.C. He has written extensively about international development issues and most recently just completed a book called *Farm Fiasco* which will be published in a few months by the Institute for Contemporary Studies in San Francisco. His book addresses the shortcomings of United States agriculture policy, in particular the impact of subsidies that we have been providing to agriculture on American farmers and on American consumers. Our reason for having him with us this morning is that U.S. agriculture policy is an important Link in the policy dialogue that is now being undertaken in Africa itself, particularly as it relates to Europe and the Common Agricultural Policy of the Common Market countries on which so many of Africa's agricultgural exports depend.

Next we have Jacqueline Damon, who is a country macroeconomist with the World Bank. Ms. Damon just recently joined the Bank following a multiyear period of service with the International Monetary Fund, where she had worked as a country economist for the Africa region. Prior to that, she worked as chief economic advisor to U.S. AID in Senegal. She thus has extensive countryspecific experience dealing with such thorny problems as structural adjustment Loans and the role of parastatals in agriculture, matters most pertinent to our discussion this morning.

Dr. Mudiumbula Futa, who is a division chief for Agricultural Policy of the African Development Bank in Abidjan, Ivory Coast, is by training an agricultural economist, having studied in the United States at the University of Florida, Oklahoma State University, and at the University of Chicago. Because the African Development Bank is a major player in development Policy choices in Africa, we are especially interested in his perspective on the issue of agricultural policy alternatives.

Our next panelist is Dessategn Rahmato, who is a research fellow at the Institute for Development Research at Addis Ababa University. Dr. Rahmato did his graduate work in Political Science at the New School for Social Research. one of his research specializations is the field of agrarian reform in Ethiopia. His book, *Agrarian Reform in Ethiopia*, was published just two years ago by the Red Sea Press. Given the revolutionary changes that have taken place in Ethiopia over the past several years, Dr. Rahmato brings not only scholarly but also first hand observational experience of agricultural changes in a country where food and agricultural sustainability continue to be of prime concern to the world community.

Dirck Stryker, an economist at Tufts University, has extensive experience in the field of agricultural policy in Africa. Dr. Stryker has been a consultant to most of the major international development organizations working in Africa and was a principal co-author of a major study published for the West Africa Development Association in 1981, Rice in West Africa. Rice is indeed an important commodity in the agricultural policy debate, as many countries have found themselves increasingly dependent on this commodity. The issue in this case is whether rice can be produced ecormxnicatly within Africa or whether it is a commodity that will have to be imported based on the cost of attaining self-sufficiency within African countries.

Finally we have Dr. J.D. Von Pischke, who is a rural credit specialist with the World Bank in Washington. He has written extensively on this issue and has also worked with the Economic Development Institute within the Bank. He brings to us is a perspective that relates the role of financial incentive packages as they affect agricultural productivity in Africa, and of course, how the World Bank plays a role in the policy dialogue in Africa.

In addition, Let me also take this opportunity to introduce our keynote Luncheon speaker, Mr. David McAdams. Mr. McAdams is the United Nations Development Programme Deputy Director for the Southern Africa region. In the past several months he has visited all of the countries in the region, an area where issues of food security, food adequacy, and sustainabitity are very pressing matters. In addition to his UNDP experience in Senegal and Madagascar, he has also worked as AID country director in Senegal. Given his Long-term experience, we are thus Looking forward to Mr. McAdams' presentation, and to his observations on the role that the UNDP is playing as an actor in the process, notably, its intervention and support for sustainable agricultural policy choices in the region.

Before we begin, I would Like to introduce Dr. Suresh Desai, Dean of the School of Business at Montclair State University. in so doing, let me take this opportunity to thank Dean Desai and the other divisions of Montclair State University whose support has been crucial in enabling us to sponsor this conference today. The List of sponsors and individuals who have helped in this process is indicated in your program. Let me also take this opportunity to bring to your attention our publications desk, which contains copies of the proceedings from our May 1987 conference, *Managing Africa's Economic Recovery,* as well as a List of forthcoming Center research monograph publications. If you are interested in these titles, please Leave your name with the individual at the conference information desk.

Suresh Desai. I am very happy and delighted to extend a hearty welcome on behalf of the School of Business Administration, its faculty and staff. This is the second national conference that the Department of Economics has sponsored with the Center for Economic Research on Africa. Montclair State University has a very strong commitment to international issues, both in its curriculum as well as in its faculty profile. We have at Montclair a strong international studies program which consists of a Latin American Studies Program, an Asian Studies program, and an African-American Studies program. When Dr. LeBel and the faculty of the Department of Economics proposed that we should have a Center for Economic Research on Africa, I was delighted because it was a strong complement to the efforts that Montclair State University is making in internationalizing our curriculum and exposing our students to international issues.

This conference has the support not only of the School of Business Administration, but also of the School of Social Sciences and the Humanities, of the African-American Studies program, the International Studies program of Montclair State University, and the Office of the President of the University. I would like to extend my thanks to these entities and to their directors for their support.

The issue we have selected here is a very important one. It deals significantly with, as I believe, the human issue, i.e., whether human beings will have an environment in which they can realize their potential, whether they will be able to meet their basic needs of food, clothing, and shelter. Our interest in developing and supporting the center for Economic Research on Africa is that we should engage our faculty both from the School of Business Administration as well as from the School of Social sciences and Humanities to look at such important Public Policy issues. But within our dialogue, the emphasis is usually intellectual and theoretical, as it so often is in an academic community. It is thus appropriate that occasionally we involve practitioners into the dialogue.

With today's conference, we have distinguished guests who are either at the front Line dealing with policy implementation, or someone such as Mr. Bovard from the Cato Institute, who systematically monitor those efforts. Today we have the opportunity to hear from practitioners, from imptementers of existing Policies, who can give us their perspective, how they view agricultural policy, and whether it is succeeding or not.

My biases, as some of those who know me well, are clear. I belong to "the other side". When we discuss the food and agricultural situation, I hope that we will not simply pay attention to the production side. As my soul brother, A.K. Sen, has brilliantly pointed out, poverty and famine are not strictly inverse functions of food production. Even with increasing food output there can be significant famine and poverty. When we recommend public policies with respect to maximizing production and efficiency, we should at the same time evolve complementary income distribution policies so that people even without hope can survive in terms of their basic human needs. Otherwise, in the process, certain groups in society would lose their cover resources and thus their ability to command resources in the marketplace. In spite of increasing food production, we may thus see serious starvation and malnutrition.

The second theme that I would Like to stress again is that we should also took to the institutional and political channels through which supply and demand are expressed rather than looking at supply and demand in isolation. in so doing, I think we will arrive at a more optimal and effective policy. I am Looking forward to this discussion, partly because my sources of information come so often from Journals and academicians.This is an important opportunity to hear the views of the practitioners. I again extend a hearty welcome, and I hope that you will find this conference professionally rewarding, personally enriching, and fulfilling. Welcome.

Phillip LeBel, CERAF. Thank you Dean Desai. In turning to our panelists this morning, I would Like to proceed in the following manner. First, each panelist will have approximately twenty-five minutes to make an initial presentation. Then we will give them an opportunity to share reactions with each other, after which I would like to turn over the discussion to members of the audience, so that we may engage in a dialogue. Let me now turn to our panelists, beginning with Mr. James Bovard.

James Bovard, The Cato Institute. I was asked to talk today about the success of government agricultural policy in the United States and Africa. I thought my speech should last for about twenty seconds. In general, the more I study these programs, the food situation in Africa, the U.S. and elsewhere, the more it looks to me that most of the wortdls food problems would be solved if there were some way to round up most of the agricultural economists, put them on a barge, and send them to Antartica. So much of trouble is due to the idea that agriculture is "special", that food is so important that politicians and bureaucrats must control agricultural food prices. But everywhere that politicians have set prices we have either surpluses or shortages of food. In the west and Europe, in the U.S. and Japan, governments are spending over $100 billion dollars a year for subsidizing food production. In Africa and in other places governments are paying farmers less than their crop is worth and it is the same story of politicians messing up the economy in different ways and in different places.

Back in 1930 the *New York Times* surveyed the wreckage of U.S. farm markets after the Federal government tried to drive up wheat prices. Its report concluded that it was perhaps fortunate that the country had its fingers burned so badly during the very first trial in the attempt at government control of farm prices. Even fifty-seven to fifty-eight years ago, when the government tried to control farm prices in the U.S. it was a disaster. Yet the federal government keeps disrupting U.S. agriculture year after year. The trouble with farm programs here in the U.S. and elsewhere is that they are not working, have never worked welt, and that in the U.S. at Least, Congress has never fixed them.

Our current subsidy to agriculture in the U.S. is roughly $30 billion dollars a year. That is equal to giving every full-time farmer a new Mercedes each year. With the money spent to subsidize dairymen in the U.S. with high prices and government handouts, the average American family since 1980 could have bought its own dairy cow. With the same $130 billion dollars that the goverment has spent on farm programs since 1980,the U-S. government could have bought every farm, barn and tractor in twenty-three eastern states. The average head of household in the U.S. now works almost one week a year simply to pay for the welfare payments of Less than a million farmers.

The current U.S. farm Policy is supply control, paying farmers to grow less food, putting restrictions on the amount of food that farmers can sell. This is a purely anti-export policy. it makes no sense. This year the USDA will pay farmers to idle almost 80 million acres of farm Land. That is equal to shutting down the entire states of Indiana, Illinois, and Ohio. The goverrment is shutting down some of the best farmland in an effort to drive up world crop prices. This is a great subsidy for foreign farmers but it doesn't make any sense for U.S. policy. Both in the U.S. and elsewhere politicians have taken control of farm credit. Here in the U.S. the federal government guarantees or controls roughly half of all farm credit. A few months ago, the Farmers' Home Administration made a $9 billion dollar bailout of bankrupt farmers. This was a totally insane policy because most of these individuals are America’s Least competent farmers. There are Lots of stories about government giving a Loan to dairy farmer to set up a farm. The farmer is so incompetent that aLL of the cows die, but the goverrvnent comes back and gives them a second Loan to buy another farm and try again. if this is industrial policy, we don’t need it.

The flip side to the supply-control programs and the other government programs that encourage inefficiency have been massive export subidies, to get rid of the crop surpluses that are produced in the U.S. Thanks to federal agricultural policy, the U.S. is now showering billions of dollars of benefits on hostile nations and dictatorships. American wheat is cheaper in Moscow than it is in Kansas City. American sorghum is cheaper in Warsaw than it is in St. Louis. And American barley is cheaper in Baghdad than it is in New York City. The USDA is spending three times the world price to dump U.S. butter and sugar on world markets, and spend up to four times the world price to boost rice exports. For many of these exports, it would be cheaper to burn the crops or simply dump them into the ocean than to pay these crazy subsidies.

A Lot of these export programs have had a direct effect on the third world and on Africa in particular. The U.S. rice program, which was launched in 1985, took effect in early 1986, and drove down the world price of rice by a magnitude of over fifty percent. It was pure predatory pricing to the benefit of Less than four thousand American rice growers. As the U.S. spent $4 billion dollars on these subsidies, it bankrupted a lot of Thai rice growers in Thailand and elsewhere. Similarly, the U.S. peanut program forces American farmers to get a federal licence to grow peanuts and that has a very disrupting effect on the world market for peanuts. The U.S. has very strict import barriers on peanuts and that has a bad effect on peanut growers in Senegal.

U.S. sugar programs are some of the strangest agricultural policies that we have. The U.S. is one of the world's Least efficient sugar producers. The people in the Caribbean can grow sugar cane for less than a third of the price in the U.S., but the U.S. is still insisting on having their sugar production subject to strict import barriers.

Cotton is another example. The average American cotton grower is a millionaire. Why he needs government benefits escapes me, but he gets a Lot of benefits because

Southern Congressmen are very powerful in Congress and they write much of our agricultural policy. As a result, the cotton program bushwacked cotton growers in Chad, Egypt, and other pieces for the Last few years by intentionally driving down the world price in an attempt to increase U.S. cotton exports. The program was self-defeating: our volume of cotton exports grew but the price fell so far that we Lost money when the cost of subsidies was taken into account. There again it makes no sense.

U.S. agricultural programs have spurred a war of agricultural subsidies among the U.S., the Europeans, Japanese, and others. These subsidies have helped to close the doors of Europe to food imports from the third world. Most African agricultural exports go to Europe, and not to the U.S., but the U.S.-EEC conflict has encouraged Europe to become much more self-sufficient in food. Because of the EEC's common agricultural policy, trade barriers have been rising in Europe with disastrous effects on African producers.

With the current GATT round of negotiations, President Reagan made an excellent proposal to get rid of aLL trade barriers in agriculture. Hopefully,other countries will support that initiative. Hopefully, the Europeans will follow their self-interest and stop Paying as much as twice as they need to for food. if trade barriers on agriculture were to drop, that would be an excetlent development for Africa because the Africans would benefit far more from trade than they would from more handouts.

I think that the question of Africals future is largely a question of trade versus aid. in the Last twenty to twenty-five years, there has been an enormous emphasis placed on national self-sufficiency, on countries building up their own economies, and on becoming self-sufficient in food. It makes as little sense for many of these countries to try to be self-sufficient in food as it would for the U-S. to try to grow its own cocoa and coffee. There are natural advantages and natural disadvantages in food production. So, it is just insane when we contemplate the consequences of these current agriculturat policies.

Africa is now the subject of much intensive policy reevaluation. Many observers think the problem could by solved by increasing aid from U.S. AID, from the World Bank, and from other development institutions. personally disagree. I have Looked at a Lot of the Food for Peace programs, the P.L. 480 programs that the U.S. goverment runs. The U.S. often dumps "free,, food on foreign countries, but this has driven down farm prices and bankrupted a tot of third world countries, farmers. In Haiti, the farmers there are hurt so much by American “free” food that on any day of the week the "free" food comes in the market, the farmers do not even bother to try to sell their food because prices are so low.

The World Bank has gotten a lot of critical attention for its role in Africa. Yet, I have to say that I think the Bank has some excellent economists who have done some excellent policy analysis. Some of the World Bank reports on Africa and on East Europe are among the best I have seen anywhere in analyzing the economic developments in those countries. However, World Bank policymakers don't follow their policy analysts, advice. And that is where it has worked very badly for Africa.

The World Bank's annual audit report last year said that seventy-five percent of World Bank agricultural projects in Sub-Saharan Africa were failures. That is a fairly weak batting average. You could not do much worse. As one indication of why such failures have occurred, in Tanzania and in Ethiopia, the World Bank has funded major programs to resettle the population. These resettlements, often coercive in nature, have had devastating effects on agricultural production. In addition, the World Bank's own audit report concluded that World Bank loan officers often put third world governments under unseemly pressure to tend in the sense that Loan officer performance was being measured more by how many loans they gave out rather than by how the .oans performed. With that kind of incentive system, you cannot expect good results.

As evidence of this climate, there was a piece a couple of weeks ago by Melanie Kammen, of the Heritage Foundation, in the *Wall Street JournaL*, in which she provided a critical took at some of the advice that the World Bank has been giving in Africa. Though people thought that there was wide agreement that the problem in Africa was one in which governments were not paying farmers fair prices for their crops, and therefore if one raised prices one could solve much of the food shortages and export shortage problem, this journalist found that on the basis of a 1987 World Bank study, there is still not even a formal doctrine on agricultural pricing in the World Bank. There are still many Bank projects that assume that the problem can be solved by an overhaul of state marketing boards. However, state marketing, or grain, boards have a very poor record for paying farmers. Their policies have often been very arbitrary, thus undermining farmer incentives for expanded production.

Going back to the structural adjustment Loan policies of the World Bank, there are many people who think that the problems of African agriculture can be solved if the Bank would give more Loans with the "right conditions" on those loans. I have never been able to understand why it is necessary to bribe a country to follow its own economic self-interest, which is what a lot of these structural adjustment Loans are doing, in essence. But the World Bank, according to their own audit reports, does not impose that many conditions on borrowers. Very often the borrower does not think it necessary to follow the condtions that are imposed, with the result that loan recycling keeps going on and on.

Despite the Bank's policy initiatives, governments of Africa have often tried to manage agriculture, tried to control it, tried to raise revenues from the farmers, and have tried to tax farmers to the benefit of urban consumers. This is a policy that has worked out extremely badly. In the Last twenty-five years, there has been upwards of a twenty-five percent fail in per capita income in Sub-Saharan Africa. Government grain boards have been infamous in Africa for mistreating farmers. In some countries there are roadblocks just because the government is trying to catch farmers who are trying to sell their crops on the black market. There are lots of reports of farmers being arrested, and executed, by government officials for trying to sell their crops based on charges of liprofiteering". Now it is very difficult to talk about sustainable agriculture if government is shooting farmers. That is not the way to balance the food equation.

Some people say that if government can get the "right mix" of controls, that somehow agricultural policy will work. Goverrvnents have been trying to concoct a "good', agricultural Policy for the Last five or six decades in the U.S. and elsewhere. Almost every effort has failed. There is no magical mixture that will allow politicans and bureaucrats to dictate to farmers and consumers to It is not a question of the cases, it is a question of the Here in the U.S., in the crops and government controls, the In fact, American farmers have unsubsidized crops than they have from subsidized crops.

As an example of a good agricultural policy, the best export crop in the U.S. is soybeans. Soybeans receive very Low government subidies. In fact, they receive almost none. In 1987, the U.S. gave zero subsidies to soybean growers and we exported $4 biltion dotlars worth of soybeans. In contrast, the U.S. gave $12 billion dollars worth of subsidies to corn growers and we exported $3 billion dollars worth of corn. It is beyond me how the U.S. can make a profit if we pay $12 billion dollars and get $3 billion dollars worth of sales. On the other hand, I think the U.S. soybean program is a good model. The way the soybean model works is that government price support loans are paid at seventy-five percent of the previous five years' world prices. This provides a floor for farmers. Because it works well for the U.S. where it has been tried, I think it would also work well in Africa.

To sum up, every time politicians have tried to control farmers, the same failures have been repeated, all over the world. Politicians and bureaucrats always set prices to please voters, not to balance supply and demand. As Long as politicians are in control of agriculture, we will have either surpluses or shortages, neither of which we need.

Jacqueline Damon, The World Bank.Well I guess after that speech that I am going to have to say something this morning to balance the record. I want to say at the outset that I am definitely in the category of the practitioners and not the theoreticians. I have personally been involved in trying to implement structural adjustment programs for a number of institutions as described by Dr. LeBel. I must say that although I think the record is not quite as bleak as was painted by the previous speaker, there certainly is a lot to learn and a lot that needs significant change. Since I have been involved in structural adjustment programs, both with the International Monetary Fund and now much more recently with the World Bank, I thought that today I would focus on what these institutions have attempted to do through structural adjustment Lending and how these programs have affected agriculture.

First I would Like to provide you with a very short background as to why both the Bank and the Fund, for different reasons, have moved toward structural adjustment lending. In the 1970's, and perhaps also due to some of the audit reports referred to by Mr. Bovard, we did discover that our projects in Africa in particular, but elsewhere in the world as well, were falling far short of the projected outcomes that had originally been made in the design stage. Increasingly, the audit reports seemed to indicate that one of the min obstacles to success was a lack of a conducive policy environment and the fact that although the investment components focused on providing potential productive capacity, the incentive structure was not correct. of particular concern was the plight of farmers in Africa, the impact of the shift in the urban-rural terms of trade in favor of the urban sector, and the adverse impact that this shift was having on agricultural production. I think also that both institutions were being pushed into trying to solve some of the external financing requirements of these countries. This pressure arose in the 1970's, and increasingly in the 1980's as countries were confronted with serious balance of payments deficits, with major difficulties in ensuring the flow of essential imports to meet the requirements of their economies.

The World Bank first initiated structural adjustment in Africa in the early 1980's and has become increasingly involved in what is called policy-based Lending. Since the inception of this process, the Bank has lent to twenty-seven different African countries, twenty-three of which are what we call low income countries, and four middle income countries. There has been a total of fifty-six adjustment operations in Sub-Saharan Africa thus far, amounting to approximately $3.2 billion dollars. Admittedly, this is a far cry from the $30 billion in annual U.S. subsidies to agriculture, but it is still a significant proportion of the Bank lending program.

The IMF, on the other hand, is definitely a newcomer to the structural adjustment process. I think the IMF has been pushed into structural adjustment lending and has done so rather reluctantly. The IMF is an institution that is comprised primarily of macroeconomists. They do not generally claim to have particular expertise, or comparative advantage, in the structural adjustment area. However, they have been forced to admit that the financing, on basically market terms, which they had been providing to African countries, was not working. It was not working because IMF Loans were usually based on the assumption that countries were facing only temporary balance of payments shortfalls even though the causes were often more structural in nature.

Upon re-examination, the IMF did introduce a structural adjustment faciliity in 1986. it was financed originalty through trust fund reflows, and amounted to approximately one billion SDR'S. Then, through additional pressure, and the fact that the IMF was concerned about the inability of some of the countries in Africa to continue to service debt that they owed to the Fund, there was a tripting of the structural adjustment facility. it is now approximately three billion SDR'S. This increase in the facility became effective as of January 1988.

I would now Like to address sow of the types of constraints in the agricuttural sector that structural adjustment Lending has attempted to address. I think first and foremost, structural adjustment tending has attempted to address the pricing distortions in agriculture for both export crops and, to a lesser extent, for food crops. If you took at the record – a report done by the World Bank published in 1986 constituted a major review of structural adjustment Lending and the impact of structural adustment tending one can say that there has been an increase in producer prices which has had sow impact on increased production.

Structural adjustment tending has also attempted to eliminate distortions, or what could be perceived as distortions, as a result of subsidies on inputs, and in particular, on agriculturat inputs. However, in this particular area, the objective has been somewhat ambiguously perceived. The reason why this has been so is that while there has been a recognition that subsidies may have distorted and created inefficient uses of inputs, governments have moved to eliminate subsidies under pressure to reduce their expenditures, due to fiscal difficulties, rather than to correct for input distortions alone.

Structural adjustment Lending has also been used to address trade liberalization. The general thrust has been to try to reduce tariff spreads and to eliminate quantitative restrictions with the aim of reducing average levels of protection. I think the primary objectives of trade liberalization were often set in relation to industrial sector goals and not in relation to agriculture per se. However, they have had significant impacts on agriculture, both through reductions in the average cost of imported inputs required and also in the cost of food.

Another area where structural adjustment lending has affected agricultural policy is on the exchange rate side. The IMF, and now more recently, the World Bank, have been pushing for what we call flexible exchange rate adjustment mechanisms in Africa. This is a somewhat euphemistic term for continued devaluation, which has been used mainly in order to allow African countries to restore their competitiveness in external markets. There has been some divergence between the IMF and the World Bank philosophies in the area of exchange rate policy. Because of the nature of the institution, the IMF has focused on what exchange rate has been required to re-establish short-tem balance of payments equilibrium, whereas the World Bank has tried to take a longer term approach, looking at a country's comparative advantage and attempting to determine what would be the most appropriate exchange rate to promote that comparative advantage.

The final component of structural adjustment Lending that has affected agriculture has been in the area of institutional reform. The general trend has been to increase reliance on the private sector to assume some of the functions that previously had been assumed by public enterprises. In cases where it did not seem justified to move towards the private sector because it was a public service function, the basis has been on attempting to improve the efficiency of parastatals.

I would now Like to took at what the impact of the structural adjustment Lending has been both from the IMF and World Bank perspectives and also from the borrowing country perspective. My characterization of the IMF-World Bank perspective is taken basically from internal publications, whereas the developing country perspective has been taken from my own experience, and from discussions our member borrowing countries, who are shareholders in both institutions.

I think that the Bank and the Fund consider that their push for increases in producer prices has been the singlemost positive and successful element of structural adjustment Lending, particularly in the agricultural increase in sector. Examples that are cited are the groundnut production in Senegal, a temporary but very pronounced increase in rice production in Madagascar, and the increase in cocoa production in Ghana. There is a certain awareness that the recorded increase in production may not have been due entirely to increases in production, but may also be due to the fact that with more competitive pricing, they have been able to attract cross-border trade in agricultural products which previously had been smuggled to countries where prices were more competitive. The price responsiveness seems to have been more clearly apparent in the case of export crops than in thelcase of food crops.

Another area that the Bank and the Fund consider to have been fairly successful as a result of structural adjustment lendng has been the impact of decreases in input subsidies. The general conclusion is that it has released public resources for other types of spending, including other types of support for agricultural production. Moreover, there has been very Little empirical evidence to support the suspicion that decreased input subsidies would somehow adversely affect agricultural production. The evidence thus far seems to indicate a sparser use of inputs but at the same time a more efficient one.

On the exchange rate side, the experience according to the Bank and the Fund seems to have been rather mixed. Countries have accepted devaluations, or flexible rate mechanisms, often under pressure from the Fund and the Bank. However, in some instances, as in the case of Zambia, or Sierra Leone, becuase fiscal policy was not brought under control at the time of devaluation, flexible exchange rate shifts aggravated a downward spiral.

From the borrowers, standpoint, the advantages of the structural adjustment Lending has basically been the quick disbursing element of the import financing provided in exchange for agreement to undertake structural adjustment measures. in general, I think that country officials are convinced that this has prevented even more severe foreign exchange crises in certain instances. When you talk to country officials that have implemented structural adjustment changes, many of them do see the Positive impact of price " exchange rate adjustments on the production side.This conclusion is, however, not unanimous. At the saw time, where structural adjustment lending has generated what are called counterpart funds, or local currency, for support of agricultural services, borrowers often perceive that they are able to strengthen and focus government intervention in the agricultural sector.

There are also a number of disadvantages to the structural adjustment lending process. Although these disadvantages have not always been discussed publicly, they have been the subject of much internal discusion, especially within the World Bank.One of the disadvantages that has been noted is that price and exchange rate reforms have often been derived rather intuitively, and not on the basis of any empirical data. In some cases there have been what we call “overshooting”, where producer prices have been increased and then world market prices have fallen and counries are in a situation where they have to subsidize export crops, which can be very costly. A case in point is Senegal’s groundnut industry.

Another area where structural adjustment lending has not been particularly effective has been in institutional reform. In general, institutional reforms are difficult to implement and even more difficult to monitor. It is often a judgment call whether an institution is more effective or not as a result of institutional reforms, and it is virtually impossible to suspend disbursements to a country on the basis of a judgement call.Also, local governments that have tried to implement institutional reforms have often encountered resistance from the bureaucracy and from certain vested interest groups that have benefitted from the previous institutions. Legalized monopoly rights can be difficult to dislodge.

In the export promotion field, while increased producer prices seem to have led to increased production in a number of instances, this has not necessarily translated into increased agricultural exports. Bank officials recognize that in general they have underestimated the difficulties in finding and penetrating new export markets. Although efforts have been made to put export promotion agencies into place, in general, these have not been particularly effective. Also, when structural adjustment lending began, there was not as much exchange rate volatility nor, perhaps, the general feeling that protecitonism was an increasing constgraint to agricultural exports from developing countries, although that perception has been changing in the face of these realities.

The final, and perhaps and one of the most important, disadvantage that has been discussed internally has been the lack of developing country participation in developing or conceptualizing structural adjustment policies. In most cases it has been the IMF and the World Bank economists who, based on fairly general notions of how to improve the economic climate, have more or less presented these governments with a pre-packaged program. Borrowers have noted that some of the policy reforms that have been touted in the name of economic efficiency have led to political instability, that it is not as easy as one would imagine to shift in a very short period of time the terms of trade from a vocal and active urban population to a more passive and dispersed rural population. Zambia, and more recently in Senegal, we have seen some of the effects of pushing too quickly in attempting to correct the terms of trade. In Senegal, most recently during the presidential elections, there were a number of political disturbances. We just Learned at the begiming of the week that in response to these pressures, Senegal decreased food prices which until then they had kept fairly high in an attempt to stimulate domestic food crop production.

Another disadvantage, and a criticism that has been lodged at the World Bank and the Fund is that these packages tend to sound all alike, i.e., that there is sort of a standard trend that is imposed on all the countries, and in many cases, with sinsufficient knowledge of specific country conditions. Borrowing country officials also have complained that the packages rely too extensively on a price effect when in fact there may be non-price constraints to increased agricultural production. Borrowing country officials also contend that in some instances, policy reforms are really “shooting from the hip", that missions are under pressure to put together the packages, to shovel out money to these countries in response to a real external balance of payments difficulties, but that as a result, there is not sufficient time to do the background work, to do the studies that would provide a more solid underpinning for some of the policy advice.

In terms of issues for the future, there are certainty several questions that have to be addressed. In the structural adjustment lending process. One is: What is the appropriate mix in agricultural Policy between import substitution versus export promotion? With severe debt burdens, with emphasis on earning foreign exchange, with skepticism about the ability to efficiently undertake import substitution, the relative thrust has now been on export promotion, although the optimal mix may not be readily known.

Another issue is: Should efforts be made to regulate the global production of certain crops so that there is not a disorderly movement of a Large group of countries into one crop, which would drive prices down? Similarly, is there some scope for regional specialization? Finally, there needs to be more examination of what farmer motives are and how economic decisions are made at the farm level. There are varyling levels of disagreement on this question, but at this point it is not always clear whether farmers are Looking for a stable income even if it is at a lower level over a number of years, or whether they are concerned with revenue maximization. Thank you.

Mudiumbula Futa, The African Development Bank. Thank you Phillip. I would like to start by thanking CERAF for associating the African Development Bank in this intellectual debate on economic choices for sustainable agriculture in Africa. I would say at the outset that the problein of ecorxxnic crisis in Africa, and of very low productivity in African agriculture, is now very well known among agricultural scientists and economists. While many prescriptions have been given to redress Africa’s agricultural problems, we have also been hearing for about one decade that the results have not been very satisfactory. But this is not to say that the prospects are not good. On the contrary, we believe that the prospects for sustainable agricultural growth in Africa are very good, for many reasons. Let me take this opportunity to elaborate on some of them.

First I would single out the fact that African leaders, as wait as policymakers and other institutions involved in agricultural development in Africa, are now aware of what went wrong. This was evident when in 1985, in Addis Ababa at the OAU summit, African heads of state recognized the fact that so few resources had been directed to the agricultural sector. At that summit, these African heads of state called for an increase of twenty-five percent of expenditures to the agriculture sector in Africa.

We at the African Development Bank took the OAU commitment very seriously. Among other things, we decided to make agriculture as the number one priority in our lending. When we consider the ADB, the ADF, and the Nigerian Trust Fund, the pattern of our development Loans made thus far shows that we have given more than thirty five percent to agricultural projects. In turn, when one Looks at the composition of those commitments among major sub-sectors of agriculture, we have financed about thirty percent of the total in rural development. Of course, as Mr. Bovard put it, we have not always had success stories from all of these commitments.

In our rural development projects, we have encountered some difficulties. Yet we also know the reasons why they have arisen. For one, most of these projects carry a very heavy social cost such that the productive project element does not represent a large share in sit Lending for rural development projects.

Another reason is that these projects requiire a very expensive administrative structure. Because we often do not find an appropriate administrative structure which can property implement these rural development projects, we have found it necessary to provide the necessary institutional structure in order for projects to succeed.

Another reason for failure in rural development projects has been what we would call the the top down approach. All too often the design of rural development projects has been conceived largely in a multilateral laboratory environment rather than conceived from the grass roots levels with the direct participation Of farmers themselves.

I could continue by citing several numbers and reasons why rural development projects have not worked, but I think the basic factors are clear. Yet for policy purposes, the most important thing to bear in mind is that African Leaders have now recognized these facts and are now trying to redesign policies in such a way that they became simpler to manage and in such a way that they originate from the grass roots Level.

Our strategy now, and which we intend to maintain, is to work in tandem with locally focused institutions in the design and execution of rural development projects. We have found that when we participate in rural development projects that have been initiated by the people themselves, and when some small organization such as a non-goverroental organization, or NGO, has gone before us, and have mobilized Local forces to come into the project, our chances of having a successful project increase substantially. We recognize that multilateral development finance institutions can not work alone. They have to work together with NGO's and bilateral finance institutions in such a way that we can at Least take advantage of the expertise of toca y now a a elements involved in the development process.

Beyond rural development projects, our second priority in agricultural Lending is in the area of water resources development. We have noticed that very little of our lending has gone historically to what is one of the greatest challenges of Africa, namely, dependable supplies of water. The drought - everyone has talked about drought. But how is one to deal with it? In our view, we see drought as an externally imposed environmental calamity. Yet there is a way of responding to the problem of drought within the context of agricultural policy.

First, we in the African Development Bank believe that by proper management of those water resource pockets in the Sahelian zones, we can come to compensate for the Loss of those marginal Lands which have been trapped in the drought environment. The ADB has now made a committment that at least twenty-five percent of our agricultural projects will to go into water resource management, because that is where the greatest chalienge of sustainable agriculture policy ties.

Another element which we think is a missing link in the development of sustainable agriculture for Africa is the weakness of the agricultural research system. In fact, even if rural development projects were working satisfactorily, even if we had put very good performing irrigation structures, we could riot reach a sustainable and steady rate of agricultural growth if within these structures we had not managed to institute the research capabilities to enable established institutional structures to be able to respond to rising challenges.

We now believe that we have to put more emphasis on agricultural research. Just two years ago, the African Development Bank financed its first project in agricultural research. We recognize that it was a very important missing link in our strategy to promote agriculture in African countries and we expect to expand our lending commitments in agricultural research for the forseeable future.

Taken together, community based projects, accelerating the development of dependable water supplies, and improving the rate of agricultural research productivity constitute the three key elements of our agricultural development policy strategy. Our current pattern of tending reflects these priorities and we intend to continue to move in this direction.

Beyond these priorities there are, of course, many related policy questions. What is the overall goal of agricultural policy in Africa? Are we interested in achieving food self-sufficiency or food security? For us, these questions sometimes appear as academic debates. Yet, for practical purposes, I would say that we are committed to promoting food security at the national level. We believe this to be the most reasonable goal, for essentially strategic reasons. We believe that Africa, as a continent of nations, should strive to achieve food self-sufficiency. Yet here there is a difference. On the one hand one should promote the idea of food self-sufficiency for the continent as a whole. On the other hand, it is reasonable to promote food security at the level of individual countries within Africa since not ail countries could reasonably aspire to food self-sufficiency. However, the comptementarity of these policy goals can be realized only if we move to promote inter-African trade at the same time. When you have food surpluses in some countries such as the Ivory coast (Côte d'lvoire) and you have food shortages in a neighboring country such as Burkina Faso, it is only logical to find some mechanism to achieve regional equilibrium. Thus, we need to implement policy choices which can promote inter-African trade, particularly in the area of food commodities.

Another related policy issue, ard one which has been touched upon this morning, is what is the significance of a withdrawal of agricultural input subsidies, as is now being encouraged by structural adjustment lending packages. In my view, the removal of input subsidies tends to neutralize the stimulative effects of increases in producer prices on agricultural production, largely through reductions in demand. If goverrunents do remove input subsidies, the prices of these inputs will go up. Once you see the compression of a farmer's input-output price ratio, there is likely to be no element of incentive left to produce. While we recognize that agricultural subsidies have often been a heavy drain on public budgetary resources, we think that in certain areas, for certain crops, that input subsidies can be managed selectively and effectively.

As a word of conclusion, I would Like to say that the prospects for agricultural growth on a sustainable and steady basis in Africa are very good. If the international community can understand these possibilities and gives Africans the opportunities to have access to resources for promoting agriculture, we will certainly within five to ten years from now get Africa moving to the level it had back in 1960. We should remember that in 1960, Africa had for practical purposes food self-sufficiency. As food self-sufficiency was possible then, so too do we believe that ten years from now, we can be at that point once again. Thank you.

Dessalegn Rahmato, Institute of Development Research, Addis Ababa University. As you know there are two major development models in Africa. One is the socialist development model followed by countries such as Ethiopia, Tanzania, Mozambique, Angola, and a few other countries. The second model - you might call it the capitalist model, or free market model - is followed by a number of African countries such as Nigeria, Ghana, Egypt, and the Sudan. My experience being mostly from the socialist countries, I will devote much of my remarks to the socialist group of countries in the area of agrarian policies.

I was going to talk more about the Ethiopian experience this morning, but given the audience, I thought it would be much better to talk about the broader questions having to do with socialist agriculture. The crisis of agricultural production in Africa is, as I am sure you are aware, fairly well documented. It needs to be emphasized, however, that this crisis has affected almost equally both the socialist countries and the free market, or capitalist, countries. In terms of agricultural development, there are very few success stories coming out either from the socialist side or from the capitalist side.

Just briefly, the magnitude of the crisis, at Least on a human scale, is very tragic to think of. Let me give you some figures. More than a quarter of the population of the continent is experiencing severe malnutrition and severe food shortages. Given Africa’s environmental conditions and its political and military conflicts, there are about ten million refugees throughout the region, most of whom suffer from extreme levels of food inadequacy. As of the mid 1980's, more than half of the continent was dependent on food aid, whereas the figure ten years earlier was about eleven percent. So you can see the magnitude of the problem.

In looking at the socialist countries, the agricultural crisis has been shaped by such factors as drought, war, and peasant destabilization. At the same time, we need to focus on the state agricultural policies themselves. The state has controlled relations between peasant producers and consumers, determining the dimensions of what I call the peasant mode of production.

Now I should talk briefly about someof the state policies that have had an impact in changingagriculture relations of socialist countries in Africa. The first thing that comes to mind is agrarian reform. In a number of these countries, policies have emphasized a cultural, radical, and thoroughgoing restructuring of the means of production through land reform. In the Ethiopian case, the land reform was very radical, but one of the best stories coming out of Ethiopia has been the Land reform itself. It was a radical reform which threw out a landed class which had virtually strangled Ethiopian agriculture for many centuries. And that by itself is a success story. Very few land reforms have had this type of impact, i.e., have brought land back to the peasantry, although in terms of distribution, the reform has its problems.

In Tanzania, the problem was not really land reform, because they had very Large arable Land to begin with, but one of shifting from smatl-scate production to largescale public production. In Mozambique, Land reform has done sway with large mechanized agricultural companies. Most of these companies were originally Portuguese, dating from the colonial period. And so land reform has been part of a package of reform in these socialist countries, and it has had in many respects a successful implementation and execution. This is not to say that it has not been without problems, but that it has been by and large a success story.

The second factor that has comprised socialist agricultural poticies in Africa has to do with food pricing and food marketing. The rationale for this policy has been the following, whether or not it has worked being another question: the urban population, which is sometimes at the mercy of private grain merchants, needs to be protected from them, and from their monopolistic power. This is an issue which has to do with what we can call social equity. The urban population, as you know, is not food producing, but food consuming. Urban consumers have often fought food price increases, which has had the effect of penalizing the food producer in favor of the food consumer-

Food pricing also was at the base of the notion that governments needed exportable agricultural products and that it would be essential to have some type of control over the marketing of these commodities. Now the farmer in the countryside has not been terribly excited about exportable agricultural commodities. We know that much of the foreign exchange earnings by these countries have gone into investments which have had nothing to do with peasant welfare. But the policy has been based on the notion that somehow the peasant must be convinced that he has an interest in expanding exportable agricultural commodities, something that the peasant has not been convinced about for years.

The third item of state agricultural policies has to do with collectivization. Both in Ethiopia and in Tanzania, and to some extent in Mozambique and Angola, collectivization, or socialist agriculture, has been an important policy component. The rationale has been the following: it has been argued, quite unconvincingly in my opinion, that large scale agriculture is better than small scale agriculture, that large scale agriculture is more conducive to technological development and that it would use modern inputs. it has also been argued that where the peasant might be reluctant to produce the way the state wants him to produce, the state can always rely on collectivized agriculture to meet its food needs. This been some of the rationale behind socialist agriculture, and in particular, the emphasis given to collectivization.

What can we make of these policies? It has been shown in quite a number of socialist countries that peasant agriculture has almost always been far more vigorous than the socialist agricultural model. This has been the case for many other socialist countries as well, notably in the Soviet Union, and in China. Yet state policies persist in pushing collectivization, in pushing socialization of agriculture, both for ideological reasons as well as for reasons I mentioned earlier.

All of these policies have often been couched in moral terms. If you were to reduce them to the question of social equity, it would be fair to say that the socialist development policies have often emphasized the issue of social equity. Now this is something that we can not throw out of the discussion because some of the policies did not fit into the standard textbook notions of the market, the interchange of commodities, and relative pricing. There is a problem having to do with social equity, and the emphasis on this issue has a number of strong points. The problem is how is it possible to combine collectivist agrarian policies with social equity, or does the free market offer an equitable solution? That is a problem which is very difficult to resolve.

In my own judgment, a good deal of the agricultural policies pursued by socialist countries as well as those pursued by free market countries have left out an important element, and this element is the peasant. Neither the socialist policies I talked about nor the traditional alternatives have emphasized the peasant. Despite the emphasis given to social equity in socialist countries, there has been a notable tack of attention given to the rote of the peasant in agricultural production.

I really believe that in any sustainable agricultural context, if we do not include the peasant himself, I do not believe we will be able to design sustainable agricultural policies. I do not share the optimistic projections of some who tend to see great prospects for agricultural development in Africa within the next few years, or within the next decade because I do not believe that current policy gives sufficient emphasis to the peasant as a key element. Although policymakers often claim that they are going to carve out policies which they believe are good for the peasant, when we took ctosely at these policies, we find that the emphasis is all too often more apparent than rest. I am not trying to say that the peasant is the panacea to Africals agricultural problems, but I do feet that this element has not been given adequate attention.

There are two aspects to the role of the peasant which I think should be considered and which I believe iare important to achieve sustainable agriculture. One is that a good deal of the new Literature on peasant agriculture that is coming out has shown that peasant production has been consistently more effective than mechanized, or "modern" production. Following E.F. Schumacher, this reflects the notion that small is beautiful, which may sound romantic in a way, but this is a basic reality that should not be ignored.

The second point is that the peasant is a much better farmer on the technical side than your modern, high technology large scale operator. The peasant has been a better farmer both in the technical sense of producing most, using his resources more effectively, as well as in protecting the envirorment. This might come as a surpise to some of you, but it has been the case in my own studies, and I have tried therein to emphasize this point. So incorporating the role of the peasant, with his ability to work efficiently, within the devetopmental process, and which has not been emphasized in socialist agriculturat policies, is crucial to Africa's agricultural future.

Finally, just a point about the question of social equity. As I said earlier, I believe that an agricultural policy based on the peasant will have a greater chance of being more equitable than the kind of policy which has been followed in both the socialist countries and the free market countries in Africa. In essence, peasant-based agriculturat policies are both efficient and equitable.

Dirck Stryker, Tufts University. I am probably going to start off by committing heresy here in saying that I think the best thing for agricultural development in Africa is to promote the development of industry. I will try to explain what I mean by this.

To start off with, let me give you an example. A few years ago I was involved with a project which was designing an irrigation project in the Senegal river basin. one of the elements of that project was to train people to maintain and repair small pumps that were being used in some of the irrigated perimeters. one of the objections to that training program was that "these people will get trained in repair and maintenance and as soon as they learn how to do that they will all go off to Dakar where they will get jobs working in industry, and that's bad". Well I think it is good, that it is very important, especially for a number of countries in Africa. I am not necessarily talking about all countries, to be sure, but many of them certainty, in particular those with a poor natural resource base. It is very important to start thinking about what these countries are going to Look like in the Longer run, over the next several decades, if any development is going to take place. I have been working now for about five years in Niger. Niger is a very poor country, and nobody has yet found what to do with sand to produce an exportable product. And so in Niger, they are going to have to produce something else.

Let me just go through a quick diagnosis of the problem. This is highly simplified. It does not do justice to all the variety of countries, and it focuses more on countries without much of a natural resource base. With these caveats in mind, I would list five key elements that have been central to the Lack of agricultural development in Africa.

First of all I would say the difficult and unstable envirornnent has been a factor. Certainly this is true in the Sahelian countries, but to some extent it is true in the more humid forest regions that provide lots of difficult technical problems that are not easy to solve in those regions. In many of these countries, developing both food and cash crop production is simply not all that easy. I just visited the International Institute for Tropical Agriculture Last year in lbadan, Nigeria. I don't think, by any means, that they have solved all of the technical problems in this area.

Second, there is the Lack of a viable Low cost technical package for food crop production that could be used over much of Africa. Thus far, the results of research in'food crop research have not been very great nd provide little ground for optimism. You cannot simply present farmers and say "Do this and you have got it made". You don't. You don't have that package right now.

Third, take a look at growing population density. In some areas where you have agricultural systems that do not sustain high population density, you are talking about systems that make extensive use of fallow. You can intensify those systems to some extent, but the technical problems involved in intensification have not all been solved. Intensification also is very difficult where you have very dry conditions. I have worked a lot in the pastoral zones in Africa where the possibilities for intensification are extremely limited. The pastoral zone probably comprises half of the area in agriculture, if you include livestock, in Africa.

Fourth, I would say the uncertainty that has been created in some countries, but not in all countries, by government marketing and price policy has been extremely detrimental to agriculture. And finally, I would agree with other members of the panel that in some countries overvaluation of the exchange rate has been a very critical problem.

Given these five principal problems, what has been the progress towards a solution? First of all, I would have to disagree with Dr. Futa on the viability of solving the problem through irrigation. Having Looked at a lot of irrigation schemes in Africa, and in particularly in the drier semi-arid zone, the costs of irrigation on any kind of scale are enormous. The costs per beneficiary are enormous.

Four to six years ago, it cost $20,000 per hectare to develop irrigation in Mauretania along the Senegal river. That is an iricredible price. I do not think that you can afford it in Africa today. I do not think that it is going to be a viable solution. it is going to be a marginal solution. I am not saying that one should not put any investment in irrigation. I am just saying that it is going to make a marginal contribution for the next fifty years. I do not think that there is any way around that problem.

Second, I mentioned the lack of good research results. Nevertheless I would heartily support a sustained tong-term commitment to agricultural research. I think that it is extremely important, and that it is capable of producing solutions that cannot be envisioned today, and it is extremely important that the effort be made.

Third, I would say that there have been some considerable improvements in the policy environment. Many of these have already been discussed. I will just briefly mention some of them. First of sit, since I am pushing industry, I will say that the industrial incentive structure in a number of countries has been improved considerably. There is much that can still be done, but there have been some improvements that have been made. I think more can be done in trying to promote the growth of exports. We need to took more at Asia. We need to took more at other areas of the world and see the kinds of things that have been done there to encourage export growth, industrial growth based on export orientation. I think this is vital. Domestic markets in Africa are too small. When I was in Nigeria Last summer, people kept saying "But Nigeria is a very Large country. We have a large enough domestic market." An Australian colleague by the name of Greg Cutbush replied, "Yes, but the Nigerian market is smatter than the market of Sweden", which means that the number of people does not add up to a Large market, and that it is also per capita income which is very important.

In order to get beyond the narrow confines of these markets, and of course markets in other countries in Africa are much smatter than the Nigerian market, there must be export growth. Growth of exports does not have to mean the growth of industry by any means. It can also imply a more diversified agricuttural sector, though I would note a point already made, that if sit of the efforts to promote export growth in the traditional agricultural activities succeed, they cannot be sustained in today's world market. Giobal agricultural markets have limited exports will be simply to drive the price down.

I do think there is room for sorting out comparative advantage in agriculture. I think, for instance, that Ghana probably has a strong comparative advantage in cocoa production vis à vis Brazil. I think Ghana ought to be moving back into cocoa production and taking over the markets. Probably the samething is true with respect to its competition in Malaysia. That means that Africa may be able to claim, or reclaim, comparative advantage in some areas, but that in general to say that you can move forward in the traditional agricultural crops is tantamount to suicide because, as everybody remarks, the terms of trade have deteriorated anyway and it will get even worse, if every country pursues this strategy.

The second point I would make is that there has been major improvement in a mumber of countries, though not all, in the areas of market liberalization and decreasing price distortions. I think this has been very important. Again, using the Nigerian example, they wiped out the commodity boards and the export taxes ail at the same time, and it had a big effect. Finally I think the movement toward devaluation and freeing up exchange rates that Ms. Damon discussed is extremely important. At the same time, it is very important to try to achieve some stability. I would suggest the best way to achieve stability in the food area is to allow some imports of the tradable crops such as rice and perhaps maize, and to use price and stabilization policy on these crops in order to help stabilize the prices of some of the more basic riontradable staples. We do not know very much about the ability to do that but it does represent a possibility.

Third, there is the whole idea of becoming completety self-sufficient. We have to recognize that there are certain areas where self-sufficiency is extremely difficult. One of the great dramas of the less developed world as far as agriculture is concerned over the last fifteen or twenty years has been the enormous growth of wheat imports by countries that are moving into a middle income range. Most of these countries can not produce wheat, or can do so only at extremely high cost. They simply have to accept the fact that they are going to have to impose very high disincentives via tariff barriers, or they are going to have to finance the imports. It is clear that as development proceeds, consumers want to consume bread as opposed to millet and sorghum or a range of other staple crops, and they are going to import more of that wheat because it is difficult to grow outside of temperate countries at any reasonable cost.

The same thing is partly true with respect to rice. Rice can be grown over a much greater area than wheat, though for the forseeable future, the price of rice is going to remain at a relatively low level in relation to its longer term trend. Therefore if a country decides that it is going to produce rice locally, in many cases using irrigation, that this is going to be expensive relative to the opportunity cost of importing rice. This is not saying that the country should not go ahead and produce locally, but it is going to be expensive and the country should be prepared to incur those costs.

What kinds of policies would I see as being conducive to growth and development of the agricultural sector? First of all, I think it is very important to move in the longe term toward the development of export-based industry. I think policies need to be put in place to promote that. There needs to be investment in looking for opportunities for marketing and production. There is a great deal that needs to be dorw in that area. Virtually nothing is being done today. Over the Longer term, that is the only way many countries are going to be able to absorb the growth of labor from the rural areas and take some of the pressure off the land. This heavy pressure of population on the land is extremely difficult to deal with - it is very difficult to make improvements when you have constant population growth.

The second policy I would recommend would be a modest to fairly high level of import tariffs designed to further the objective which every country has of national food self-sufficiericy. The most appropriate policy instrument for doing that is the use of tariffs. If countries want self-sufficiency, they ought to be able to pursue self-sufficiency, and a tariff is the most appropriate way to do so. However, they should be conscious of the costs of protection.

The third policy I would recommend is the use of import policy to help stabilize domestic food prices. The instrument that I would see as being most useful would be some kind of variable levy, such as that employed in the European Economic Community in its earlier days. It is still employed except that it has been so successful that Europe has to export rather than import some of the products that were subject to a variable levy. I think it would be quite useful within the African context, particularly if tariffs were high enough so that you would not run the risk of the world price rising above the domestic price.

Fourth, I would suggest that export taxes be eliminated in general. The reason for this is because a certain degree of protection exists in the iridustrial sector on import competing goods and this implies there is a bias against exports vis à vis importable agricultural goods as well as importable manufactured goods. There is also a bias against exports vis à vsa nontradable goods, which again is due to the overvatualion of the exchange rate. That bias needs to be understood and systematically countered by avoiding further taxation of exports. A number of countries are moving in that direction, Nigeria being the most notable example. Of course in Nigeria it was easy because of the petroleum revenue that they could use to replace export revenues. By and large, most countries are going to depend on trade taxes anyway for their revenue and this could come through relatively uniform import tariffs.

Certainly, I would advocate keeping the exchange rate flexible. This is very important. In a study I participated in with the World Bank, we did an analysis of the history of price policy in a number of countries. I worked on Ghana. What was astounding was the difference in the degree of distortions that have been introduced in Africa compared with, say, Latin America, despite the fact that Latin American inflation has been many times what it has been in Africa. The reason is that Latin America learned the lesson some years ago that you have to move the exchange rate to maintain a balance in relative prices if the absolute Level of prices is going up very rapidly. Now I do not mean by any means that one should just forget about inflation and macroeconomic policy, but to the extent that inflation does exist, it is terribly important that it not be allowed to create distortions in relative prices which occur most Likely through exchange rate policy. Well, I think I will stop there. Thank you.

J.D. Von Pischke, The World Bank. Some of you are probably a little worried by now that the last speaker on the list happens to be from a bank, a financial analyst wearing a grey suit. You probably think that the only thing that could be worse would be having an accountant speak to you after a very heavy Lunch. I have asked the organizers to hand out an outline of some of the issues I would like to discuss with you. My question is basically: "What is the role of agricultural credit in the efforts to achieve sustainability in African agriculture?"

The issue, as it is frequently put, is whether the lack of access to formal credit from institutions such as banks and agricultural finance corporations operates as a generally binding constraint to sustainable agriculture. Are there cases where it is not a general constraint? The question we are asking is: Where does the financial shoe pinch the agricultural development foot?

UnfortunateLy, there are not a whole lot of data that I can cite to suggest in a rigorous mamer that we have a clear answer. There is, however, a lot of circumstantial evidence. Now against all of this is the feeling that credit need, that the shortage of credit, is a pervasive constraint. As you ride along in your Range Rover and you Look out the window, you can see that African farmers are materially poor. You would like them to live in a different way, closer to the way we live. They suffer too much. Surely credit can help, you think. And this motive has launched an awful lot of credit.

I would Like to give you a message of hope. The message is that while resources are scarce in Africa, credit does not have a terribly important role to play. Lots of African agricultural development will occur without access to formal credit. That is cause for hope.

From an intuitive and circumstantial perspective, let me try to suggest why the role of credit is often overstated. First of all, if one takes the record of third world agriculture in general over the Last thirty to forty years, the record is pretty good. Who ever would have thought that India, for example, would succeed in feeding itself? China is somewhat the same. Now there has been some backsliding in Africa in recent years, but even then the record has not been all that bad. There is a lot to brag about in terms of third world agricultural development.

Against this pattern of agricultural development fewer then twenty percent of rural households have had access to formal agriculturat credit. High levels have been reached in Thailand, perhaps fifty percent of households there. In India, possibly thirty to thirty - five percent of households have formal credit, but generally, the level is fifteen to twenty percent. Now should we assume that sit of the progress has occurred on those fifteen or twenty percent of farms who have received formal credit? Wait, some people say "sure". I doubt it very much.

In my visits to African farms, I have seen tremendous things that have happened without credit. Now one could also ask whether there are any externalities or linkages arising from the presence of credit. If you give fifteen or twenty percent of households credit, do things happen in the economy that makes adoption easier for others and does this stimulate growth in the non-credit sector of agriculture? I am not convinced at all that these externalities, or linkages, are very strong.

Let us look at development theories, two of which have formed the basis of much debate over appropriate policies for development. One is the "big bang" while the other may be thought of as organic progress, or the appropriate technology approach. The big bang theory is exemplified by the large-scale commercial agriculture model that Ato Dessalegn spoke of. In general, one can not say that the future of African agriculture ties in large scale plantations and large scale exploitation. Large scale agriculture uses credit in the normal course of business as a commercial activity. But that is not where the answer lies. Africa is essentially a continent of small producers. There will not be many Gezeira schemes or many Tanganyika groundnut schemes in Africa for reasons that have already been discussed this morning.

Turning to the organic progress model, Let us keep in mind that small-scale agriculture is labor-intensive. It also evolves incrementally. It is not the big bang. You don't all of a sudden clear land and put in high tech agriculture with lots of machines and scientific laboratories. Because it is incremental, it is small scale. Things happen over time, and there are very positive and consistent patterns in many places.

Let me give you some examples. In Kenya, tea growers have used their returns from tea, which is a very lucrative crop, to adopt hybrid, cross-bred cattle that can produce much more milk than local breeds. They have used the profits from milk to produce pyrethrum, which is another high-value crop. Hybrid maize - I can remember visiting farms in Kenya where the maize looked very good. Most of it was improved varieties. And so we would ask the farmer, "How did you-come about this choice?" And he would say, "Well, you know, a friend of mine was trying this and I got a cup full of seeds from him and we planted them out behind that shed and watched them. It seemed interesting - we were all doing local maize at that time. And then we planted a small plot the next year and th at Looked pretty good too. So then we put in a Little more the following year and that was a bad year. And that told us what we needed to know".

In a bad year, how did the improved maize compare to the local maize? Many times, the local varieties are more robust in bad years compared to the improved varieties. After this experience, the farmer decided he could bear the risk. That is how adoption occurs. I have been on coffee farms in Kenya where they have planted star grass, a kind of fodder grass, between rows of coffee on rather steep contours. it is good for environmental conservation, and provides good cattle feed. Now has any administrator of U.S. AID, has any Swedish ambassador, or any German parliamentary delegation ever been taken to see grass planted between coffee trees? No, because the big bang is what gets th attention. You want development instantly, therefore y need credit. However, development occurs in other ways.

In the Lilongwe projects in Malawi, one of the integrated rural development projects which was spoken of by my friend from the African Development Bank, we put in a lot of credit. We also put in a lot of infrastructure, and things went pretty well. However, we also Looked over the fence at Doha, the district next door to LiLongwe which received no project assistance, and the same basic things were going on there. So did big credit make any difference? Possibly not.

Artificial insemination. If you are going into livestock, in certain areas you have the choice. You can give farmers credit to put improved stock on their farm, or you can use artificial insemination, or AI. Credit gives you animals instantly. They are transported by lorry to the farm, and they start doing their thing right away. However, artificial insemination takes years. The first insemination doesn't take. The second insemination, a month or two Later, does take. Nine months Later, the first calf is born. Now the traditional cow that has given birth goes into milk and is low-yielding. In addition, the AI calf is a bull and it is destroyed. It has no economic value.

The second year, there is another AI calf, a female, or heifer. it is maintained, but the farmer's management is such that he doesn't understand the increased husbandry demands of these improved animals. As a result, the heifer dies before it reaches breeding age.

The third year there is another heifer. That one the farmer maintains with improved husbandry, and thirty months later it bears progeny. Only then does the increased milk yield from improved breeding begin to flow. it has taken more than five years. But the farmer has grown with the enterprise and no financial institution has been put at risk if the animal dies or if things don’t work out. The farmer is not embarrassed because there is no credit obligation

Artificial insemination in Kenya has been subsidized and costs about five dollars a shot. In contrast, credit to the tune of several hundred dollars would get an animal for your farm. In at least one of our projects, twenty percent of the improved animals transferred via credit died in the first year, a disaster for borrowers.

Let us then took at savings in African agriculture. Incentives to save are great. This is because even though people are poor, they are ecormxnically efficient. They are faced with tremendous uncertainties, as other speakers have said. African agriculture is rough. Agriculture anywhere is rough. Uncertainty is very high. So how do you protect yourself? one way most people protect themselves is by saving.

Let us look at slash and burn cultivation, the most simple example I can give. You cut an area, a tremendously laborious task of clearing bush, burning it. This is done with hand tools. The ash provides nutrients in the soil - the soil is poor. You farm for a year and having exhausted the soil, you move on, to repeat the cycle the next year elsewhere. It is pretty rough stuff - no high tech, no access to markets, in effect, pure subsistence agriculture.

In the slash and burn case, the basic problem is how much to plant, because it is tremendously difficult to plant. You have to work very hard to clear that stubborn bush. That is these farmers, choice, but what choice do they make? Well, not surprisingly, they plant an amount beyond their subsistence requirements. They do this because they need enough to survive in a bad year. In a normal year, they will not harvest all of their crop. They have more than they need to survive until the next harvest. In a bad year, they hope they can squeeze by, that they will then harvest sit of the crop and survive. If they do not survive, because they planted too little, what happem? Children die, old people die. The ancestors get out of sorts with them. It is a bad situation. So there is this awareness of risk and a built-in savings capacity in the most simple subsistence agricultural system.

Given our simplified example, it should be obvious that the incentives to save are high and that savings is a natural part of the agricultural cycle. Think about it. Why are we here today? It is because our ancestors were the survivors. They knew how to get from harvest to harvest. There is nothing magical about this. Farmers all over the world in general know how to get from harvest to harvest. To do so, they save from one harvest period to the next. So, savings is not exotic. It is not just something that you do to put a child through school or to buy a new car. It is keeping things on hand that you may need fairly quickly. At a subsistence level, the savings will be relatively short term.

Monetization of savings is what we in the development institution community have often tried to promote. The idea has been to get subsistence farmers into the monetary economy and to get their savings into the banking system. Now it is very interesting that in Ghana, when they had triple digit inflation, there were advisors who were pushing monetary savings. Now can you imagine if that were your investment advisor, and he was advising you to go into cash savings which was losing its value? Would you maintain him as an advisor? Probably not. So we have to be a little circumspect.

We have to ask: "Now do farmers save?" Well, they save first of all, generally, in grains that they produce. once they have a surplus, they my invest in small livestock such as chickens, goats, sheep. If they have a Large surplus, they my buy a cow. They eat the chickens later. They sell the cow later. And that is their savings account. Now the question is, in finance, can we do better? Can a bank do better than a cow? Can a bank do better than those chickens? Quite often, it is pretty tough to beat cows and chickens as savings devices.

There is a lot of money in the African countryside, despite what you might think from the window of your Landrover as you drive past. We know this from simple tests. One is demonetization of currencies. Suddenly the fifty cedi or one hundred shilling note has to be turned in because it will soon be worthless and you have to trade it in before the deadline. When this occurs, the amount of currency that is exchanged up-country, in the remote parts, is always absolutely staggering. Whenever you open up a new branch, of a new cooperative or savings institution up-country, the money pours in, astoundingly so. It takes a long time before the loan to deposit ratio of those institutions gets anywhere above, say, twenty to thirty percent. So there is a lot of savings out there.

If you wanted to provide financial services to farmers, what should you do first? Well, what they want is a place to keep their money. They want money transfer services.There are remittances all over Africa, from towns into the countryside. Most of these transfers take place in the form of cash. One time when I was doing research in Kenya, my translator and I were driving along in a remote but relatively populated area, and the children were on their way to school. Girls had trunks on their heads, and boys were carrying their trunks, going off to boarding schools in the towns in that area. We picked up two girls who looked like they needed some assistance. They were going to a town they had never been to before, to a school where they knew no one, and they had their entire school fees and then, in cash, in their pockets. Now, can a financial system do better than that? Well, I would hope so.

Let's took at the role of credit and the role of equity finance. Equity finance is ownership finance. it is what the owner puts into an activity, or what the owner is worth. Credit is what somebody else who is not the owner puts into the business. Now credit is given with the expectation of constant returns, returns in the form of debt service, i.e., principal and interest. And you expect that that money will come back according to schedule, constant returns, as contracted. Equity finance takes the lumps that the owner may do very well in a good year and my have nothing left over in a bad year. So that is the difference in financial terms between credit and equity.

Agriculture all over the world generally qualifies for relatively low proportions of credit, or debt financing. For example, in banks, if you are owner of a bank, basically you put in ten cents of your own money and you get ninety cents Of other people's money in the form of deposits. The equity position of a bank, the capital to asset ratio, is ten percent, or lower. Why can you get ninety cents of other people's money7 Partly because deposits are insured, and partly because banking, in a certain sense, is low risk. if you are running the company that makes Pepsi Cola, you put in sixty-five cents of your own money and you get thirty five cents from the credit market. if you are running a mining operation, possibly ninety cents of your own money and ten cents of credit, because mining is high risk.

In agriculture, basically, the balance sheets of most agricultural sectors are at Least eighty percent equity and not more then twenty percent debt. We increased beyond twenty percent recently in the States, and the result is the farm debt crisis. In Europe, Denmark has traditionally had twenty percent debt financing, white the rest of the countries have generally had less. So most of the value of agriculture is equity finance tied up in the value of land, tied up in the value of livestock, in machinery, and so on. This is because of risk.

If we try to take an equity position for African farmers, because these people are so poor, who will give them huge loans? This is the big bang temptation. What happens? Well, in general the lenders are destroyed in the same way that the farm credit system here is partially destroyed became the credit given was excessive. When you destroy a bank, who should foot the bill? Well, that is something that we probably never think about when we put in the credit in the first place.

The U.S. Congress made a decision that the farm cooperative system should be able to finance more than ninety-five percent of the value of land. Did they contemplate that in the same chamber they might have to discuss a multibillion doliar bailout? If you go the excessively credit route, as politicans tend to do, you will destroy the sustainability of your financial markets. Can you have sustainable agricultural development not served by sustainable financial institutions?

I would like to end by saying that credit is an exclusive service. Whatever you do, you have standards of creditworthiness, whatever those may be. Are there extension-worthy farmers, or those who are not worthy of extension? If you build a road, do you keep some people off the road? If you provide education, do you consciously keep a majority of people out of school because they are not worthy of education? No, but in credit, you always have to make that difficult decision or else go broke. I would like to impress upon you that credit is often not conducive to the broadly based development that we went and also that it is probably less necessary than we think. Thank you.

Phillip LeBel, CERAF. Thank you. What I would like to do at this point, is to initially give our panelists the opportunity to react to the presentations that have been made. Then I would like to open up the discussion to questions from the audience.

James Bovard, The Cato Institute. I certainly enjoyed the last presentation on agricultural credit. I think he made some excellent points. It is too bad no one told the U.S. Congress that message ten years ago. I think we would be a lot better off. While I have learned a tot here, I think that I would put a tot more emphasis on pricing than others have done. Farmers do respond to incentives. Farmers do respond to prices. There have been many agricultural programs around the world that have been justified on the idea that farmers do riot respond to relative prices. There is very little evidence to support the view that farmers are unresponsive to price incentives. There has been a saying in the U.S. that the farm bloc wanted parity, when in reality it was prices.

Jacqueline Damon, The World Bank. I would Like to address some of the things that Jim said earlier about the World Bank. I think a number of his comments were well founded, but I think that one of the criticisms that some colleagues have written up on marketing boards, namely, the inability or unwitlingrwss of lending institutions to tackle marketing boards is rather unfair. Became of the complexity of the different roles that marketing boards play in Africa and because of the uncertainties of these roles and the difficulties one confronts regarding the privatization of these boards, you can not just overnight eliminate marketing boards without fairly considerable risks.

Mudiumbula T. Futa, The African Development Bank. I have to say that this conference has been an important experience. I have learned much from the ideas presented this morning. I would say that the strategy posed by Dirck Stryker, namely, using industry to develop agriculture, is going to present some difficulties. We know that Africa's rural population represents about sixty to seventy percent of all the population. If we were to introduce industrial activities in such a way that they could have some kind of forward linkages, I believe that this, if it were feasible, might not be generalty applicable for most African countries. Of course, I recognize the merits of industrialiization, and we try to develop these possiblities in terms of comparative advantage.

While we intend to promote industrialization, we are not going to do so at the expense of agriculture. Industry definitely has a role to play in the development process, but we believe that in the near term, industrialization should be limited to exceptional cases, for countries with an adequate social and institutional structure.

The last speaker (J.D. Von Pischke) presented a very interesting analysis in terms of credit. Although the rote of credit is sometimes exaggerated in the development debate, within the ADB, we have found it does play a significant rote. In terms of ADB Lending, credit is only ten to twelve percent of a typical Loan package, and we have found this ratio to be adequate for loans to farmers. We should remember that the overall idea of credit is to provide working capital even for small farmers, to help them modernize. It is very important that we find the means of taking that small working capital to the farmer, either in terms of cash, or credit in kind. When we undertake credit surveys, we find that credit can and does make a difference. We need to devise ways to improve the efficiency of credit allocation, focusing it on the appropriate scale to individual farmers so that it can be used most optimally.

Dessalegn Rahmato, institute of Development Research, Addis Ababa University. Only a few comments. My friend from the African Development Bank (Mudiumbula Futa) seems to be a lot more optimistic than I in his projections of Africa’s agricultural development opportunities. I don't know if there is enough evidence to support this optimism. But from what I have seen, the prospects for agriculture remain very dim for the period ahead.

In the final analysis, I agree with Dirck Stryker that industry will have to be the dynamic sector that helps promote agriculture. I made the same kind of argument in my book on land reform, *Agrarian Reform in Ethiopia*.

I should also like to say a word or two about credit. I found the presentation by Mr. Von Pischke very interesting. One question is: Did the speaker consider that there is an alternative to modern credit, namely, the traditional credit system7 Traditional credit is in fact not discriminatory and is open to everyone. Perhaps one reason why there is no overwhelming expansion of modern credit in the rural sector is due to the fact that there is a traditonal credit system. Traditional creditors do not bind you to a set of rules. Your property is not impressed. You can pay over a variable period. Creditors are not an indigenous separate class in most African countries, as has happened sometimes in places such as India. You can negotiate all kinds of favorable arrangements with traditional creditors.

My second comment is: Now much of modern institutional credit goes to the acquisition of innovative inputs such as new types of wheat? In other words, how much of it goes into the green revolution technology aspect?. To the extent that modern credit fosters such technological innovations, it can also have negative consequences. Not enough evidence is available to show that modern inputs are in fact better than traditional ones. Modern cows may not, in fact, be better than traditional cows. Not much of this issue of technological change has been dealt with by credit institutions.

J.D. Von Pischke, The World Bank. I should say that about seven percent of total World Bank lending over the past forty years has been for agricultural credit.Twenty percent of our total agricultural Lending has been for farm credit in one way or the other. Panelists who have responded to my presentation have picked up on the key issue, that is, the delivery mechanism: How can one deliver credit successfully, or, alternatively, how can one deliver financial services successfully7 Traditional credit is indeed the alternative. In many countries, though not well documented in Africa, but elsewhere, where the format system has collapsed, as in the Philippines, the traditional system is the maintstay of rural credit. it proves to be robust and it works well.

The problem with traditional credit is that no goverrvnent endorses it. The minister of agriculture is concerned that farmers are not using fertilizer that he thinks they should use. The agronomist has the same feeling that the farmers are below the technical optimum, and therefore joins in recommending the expansion of credit because farmers don,t appear to have it. If the government surveys people about fertilizer use, if you are the farmer, what do you say? Do you say: I didn't want this stuff?" or I didn't have any money." So the credit project is the official response. I used U.S. examples in my presentation partly out of diplomacy. There are a lot of horror stories in Africa as well and I am sure you are familiar with them.

Is the technical package adequate? This is absolutely the question. And other speakers, notably Mr. Stryker, have said that, in general, we don't have the right packages, that agricultural technology is deficient in terms of research. it may be that weakness in research contributes more to inappropriate technological innovations than the fact of technological innovation itself.

I can't agree more that we have to emphasize the peasant and his rationality. Also, Phillip, I think we may have let you down a little bit on the incentive issue. What is in it for the farmers? Now can we find out what their priority structures aret and how can we adapt government policy to fit their incentive structures? That seems to me be a tough question, but it is nevertheless an important one.

Dirck Stryker, Tufts University. I'll make two comments. First of all, on the issue on price incentives, I certainly agree that setting an incentive environment that is relatively stable and will allocate resources in the direction that is most efficient or equitable, depending on your particular objectives, is extremely important. But that said, it mist also be noted that prices are not going to do everything. Often we tend to exaggerate the role of prices because we look at the response of the producer to the price of a single crop when in fact what is happening is that the producer is shifting between crops, or between crops and other productive activities. You may get ashift away from food production into cash crops when prices change and than back again when that experience is reversed.That is not necessarily a bad thing, but it does imply that the overall response of agricultural production as a whole to price incentives is not likely to be as great as it is for a single crop.

On the subject of industry, I obviously, in order to provoke a little discussion, which I have managed to do, have stated the point a little extremely. I certainly am not advocating abandoning agriculture for industry. Yet I think that the key problem here is that agriculture vast, involving large numbers of people. In many areas in Africa, populations are spatially dispersed over a large territory. Governments have severe budgetary constraints and limited managerial capability to bring about fundamental change. This capability will increase, but it will take time. It is also going to take time for the results of research to be acquired and diffused.

The central problem confronting policymakers is how to achieve growth at the present time. I would submit that the question is not so much right now of one of the level of resources. I would argue that it is one of a better allocation of those resources. I would start first by creating an appropriate policy environment, and then I would say that governments should concentrate on the kinds of things that they can do best. For example, they can absorb a certain amount of money in roads, which have an enormous contribution to make in agriculture. Agricultural research should also have a very high priority in public budgeting decisions.

Information dissemination should also have a high priority. I do not know what is the most efficient way to disseminate information. I am riot at all sure that it is through large government extension services. In a conference about a year ago, I was struck by an observation made by a participating farmer from a midwestern state. He said that he had hardly ever seen an agricultural extension agent. The people he did see were the ones who furnished the inputs such as the seed company, the machinery salesman, and so on. I found a similar situation in Nigeria Last summer. Perhaps more could be done with input suppliers than with extension workers. What could be done through the radio? I do not know, but I think it is very important. I certainly do not underestimate the importance of committing resources to agriculture. However, given the scarcity of resources, I think it is the quality of these resources and how they are allocated that is particularly important at this point.

Phillip LeBel, CERAF. I would now like to open our discussion to the audience.

John Sutter, Former Ford Foundation Progrm Officer, West Africa. I would Like to make a couple of comments about peasants and credit at the present juncture. It seems as though there has been a big movement afoot for many years, and a convergence of ideas, that parastatals should indeed be withered away, or dwindled down. And in certain countries that approach has had measureable success. However, what I found is that in the Senegal River valley, the principal parastatal, SAED (or Société d'Amenagement Economique du Delta), went through a progressive change of reputation among the peasants in the region. Although the peasants would complain about SAED (and indeed there were some very bad things that peasants considered that SAED had done to them), as SAED's functions were progressively reduced, pesants found themselves in a situatoin where their previous access to credit was being truncated. However, these same peasants began talking about the fact that as SAED reduced its functions, they began to look at SAED with a certain measure of nostalgia. The reason for this nostalgia is that the commercial banking system was not beating down the doors to tend money to peasants.

Now in a context where you have a reduction in parastatal functions, and you don't have a very responsive commercial banking sector that is filling in the gaps that a parastatal, such as SAED had in fact been providing, the question is what kind of services could one put in place to meet the credit needs of farmers? This was certainly a growing issue in Senegal where many young men and women would engage in seasonal and longer term migration, gain greater access to education, become politicized, and still look to earning income in the agricultural sector. It is this gap that does not seem to be addressed as efforts to reduce or eliminate parastatals proceed.

J.D. Von Pischke, The World Bank. I do not know the situation in Senegal. I was informed at one time, at the time when groundmit cooperatives collapsed, that the credit supply vanished, that groundnut production seemed to decrease, but probably not for reasons related to credit. Now with the question of the banking system, again I can not speak from data from Senegal, but in my experience from other parts of Africa, the banking system is generally much constrained or repressed by interest rate regulations, for example, such that it does not make it attractive to lend to high risk agricultural activities, or to aggressively expand the frontier, if you will, of formal finance. The interest rates are just too low. This is a political issue. If you believe people are poor, and if you believe that they need credit, then how can you charge them the market rate of interest, the market being the traditional market? I do not know what the rate is in Senegal, but I assume it would be at least thirty percent. And can you really do that? Well, no politician anywhere, to my knowledge, has said that that is really a good idea. So I would assume that the banking system was constrained by factors other than the characteristics of the people.

Now, what can you do in such a case? One is the informal system that we discussed. Another one that seems to have a lot of promise is cooperative credit. In Cameroon, for instance, credit unions have been quite successful. in Kenya, the coffee growers cooperatives have gone into credit and savings. That is also a very good story. In Zambia, there are savings clubs that permit farmers to accumulate resources for a certain time of year, to buy fertilizer, generally, which has worked stunningly well.

Another dimension is the gender of credit. When one speaks of formal credit, one is generally talking about men. When one thinks about informal credit in Africa, one thinks particularly of women. Women have a tremendous role in managing short-term credit in traditional markets. This is an area we have not adequately addressed.

Jacqueline Damon, The World Bank. In Senegal, a lot of work on the banking sector has been done. What happened in Senegal is that agricultural credit was used as a social security scheme to allow farmers to purchase food and basically support consumption in drought years.The government then came in and forgave credit for political reasons. However, the overall price tag on this was about $300 million dollars. it was extremely expensive and the banks that were naturally directed toward agricultural lending are basically bankrupt right now. There is a joint French-World Bank-U.S.AID team out in Senegal now, to consider a $500 million dollar bailout of the commercial banking system. I think that this is definitely one of the problems.

The other factor is that there has been a sort of knee-jerk reaction in Senegal to formal credit, that as soon as credit is involved, and as soon as the government is involved, there is a widespread perception that credit is basically a handout. I think that the cooperative movement will have great difficulty overcoming the stigmas that have now been created in Senegal inreference to the rote of credit. The cooperatives are very much responsible for the $3oo million dollar deficit in the banking system, and they will have great difficulty in reestablishing their credibility as financially sound institutions.

Joseph Nowutu, Penn State University. Ms. Damon mentioned the success of the structural adjustment program in many African countries, and cited the example of increased output of grourxjmts in Senegal, and increased cocoa production in Ghana. I believe that the success of any program should be measured in terms of the tangible benefits these programs have on farmers, on the Lives of people in the community. We have seen cocoa production respond favorably to these adjustment programs. What has happened in the cocoa market is that the market has collapsed. Last week, I read that prices are now in the low $1,000 per tonne range.

Structural adjustment programs in Africa have really brought about immense social and human costs. These programs have also brought about changes in income distribution, and these changes have really skewed income distribution towards particular groups in society. What really bothers me is the fact that these structural adjustment programs bring about an upheaval in the structure of the economy. How well can these structural adjustment changes and these new measures in the structure of the economy, how well will they be able to sustain agricultural development in the long run as well as lead to a favorable distribution of income?

Jacqueline Damon, The World Bank. I think that that is a very legitimate question. I hope that in my presentation I did not give the impression that we thought that structural adjustment lending was a unanimous success across the board. I think you are right that by changing the incentive structure in any economy, you are changing the income distribution as well. Unfortunately, other than the short term changes, there are very little data available as to what the impact of some of these structural adjustment programs are.

You may be aware that there is now an ambitious research project co-financed with UNDP and with World Bank contributions as well, to try to determine what some of the social consequences have been. I agree that there certainly are some negative impacts, but it is going to be very difficult to measure with any degree of precision and to try to fine-tune some of the structural adjustment packages with socially targeted measures to alieviate income distribution difficulties.

Rexford Ahene, Lafayette College. My question is addressed to Mr. Stryker. I have also been thinking in terms of industrial development as a response to Africals agricultural problems, and am aware of the problem of limited market size, due to Africa’s relatively low purchasing power. Unfortunately, none of the panelists mentioned the fact that in order to overcome the problem of low purchasing power in markets in Africa, regional economics may provide a way of addressing some of the issues. Will you please address the possibilities of economic integration as an alternative way of creating viable alternatives.

Dirck Stryker, Tufts University. I would be glad to look at that issue. I think that there are certainly opportunities for regional economic integration, in certain particular cases. There are some natural comparative advantage opportunities that should be exploited to a greater extent than they are. For instance, although it is the capital of ECOWAS (the Economic Community of West African States), Nigeria is not integrating anywhere near the extent that it could with neighboring countries in West Africa.

On the other hand, I think one has to bear in mind that there are some great problems raised by regional economic integration. First of all, many countries in Africa have rather similar economic structures. It is not necessarily easy to stimulate trade through that mechanism.

Second, the costs of transportation within Africa in many cases are very high, and this creates problems. Third, if one takes industrialization and regional integration together, I think that if it is to succeed, it will require an outwardly focused strategy, one that looks to the world economy.

Beyond the issue of regional versus global integration one should also took at what kinds of industrialization make economic sense. I think that among the real opportunities in the future are those that might be called "footloose", i.e., industries which are not closely geared to the natural resource base, but locate where there are opportunities for using relatively inexpensive labor or other factors of production that afford productive opportunities. Increasingly, I think that in Africa one will find that its comparative advantage will be in the industrial area as population density grows. Unless there is a large increase in per capita income, African labor is going to become relatively inexpensive vis à vis a number of other countries, and footloose industries, by and Large, move to where such competitive cost production opportunities exist.

Competitive factor endowments alone are not going to generate a footloose based pattern of industrialization in Africa. You also have to have a favorable economic climate, which has to be connected with the market system overseas. I think that one should not put too much stress on regional economic integration to the exclusion of integration in the global economy. The success stories in Asia and in countries such as Turkey and in Latin America have been based not so much on regional patterns of specialization or integration, as on integration into the larger world market. Now there are some cases, such as traditional textiles, which have posed problems in terms of the location of finished goods production. Yet for a large number of industries, particularly those involved in the production of intermediate goods, integration into the international market can work quite successfully. Yet for are large number of areas in the production, not of final goods, but in intermediate products, where integration with the international market provides a lot of opportunities that you only know about when you go out and try to get them.

Edward Bewayo, CERAF, Montclair State University. I would like to address a question to Mr. Futa. You mentioned that before 1960, Africa had, by and large, food selfsufficiency, and that since then we have not maintained this condition, even though you state that the prospects for a return are good. It seems to me that the reason why we lost self-sufficiency in food is our being consumed by political strife, and military coups. in addition to that I would suggest that there has been a clear preference for high profile "big bang" projects. How do you think that we have now overcome these problems, that we can now devote our resources to agriculture so that the prospects will be favorable?

Mudiumbula T. Futa, The African Development Bank. Dr. Bewayo’s observations are indeed pertinent. Political strife has certainty contributed to the decline of agricultural productivity in Africa. When we see countries that have had a relative period of political stability, such as Côte d’lvoire (the Ivory Coast), Kenya, and Malawi, we have not had as much of a food crisis as we have seen elsewhere in Africa.I just participated three weeks ago in a conference of IGADD (Intergovernmental Authority on Drought and Development) among member countries, which groups Ethiopia, Somalia, Kenya, Uganda, Djibouti, and Sudan, and it was noteworthy that leaders of these countries recognized that regional peace was an important factor in achieving sustainable agricultural activity, and to overcome the chatlenge of drought. That they came together was a signal of change in attitude from some of the political conflicts of the past, that change is possible. Politically, Africa is moving into a new frontier, and I am optimistic on this issue, really optimistic. When you heard news that Angola and Namibia, and of all of the efforts that the United States is undertaking to achieve peaceful resolution of conflicts in Africa, and when you hear of prospects for having a negotiated solution, politically I believe we are moving towards such peaceful solutions.

As to mistakes in the design of projects, I said earlier in my presentation that we are now emphasizing design at the grass roots level, trying to take advantage of what farmers themselves perceive as their needs, trying to build our own participation on the experience on small organizations such as WGO's (nongovernmental organizations). In effect, we are downsizing the scale of projects. My colleague (Dessalegn Rahmato) who was questioning my optimism for the future, but I believe we do have a solid basis for the future. When he said that he does not think that the African Development Bank does not have a role to play, I might cite that we have increased our capital to the point where our Lending volume in Africa has already surpassed that of the World Bank in Africa. The World Bank is now talking in terms of $5 billion doltars in African agriculture and we are now at the $6 billion dollar level in African agriculture. While the World Bank has larger worldwide commitments, when it comes to Africa, I think that we are definitely going to have a major role to play.

Harbans Singh, Department of Geography, Montclair State University. I found the presentations this morning to be very interesting, but no one has focused on the significance of Africa’s population growth. It is highly interlinked with economic growth and agricultural growth. My question is: Why is population growth so high in Africa and second, what are the future prospects for population growth to stow down? I would be especially interested in hearing from our African colleagues, Dr. Futa and Dr. Rahmato.

Dessalegn Rahmato, Institute for Development Research, Addis Ababa University. We have not focused on population this morning as agriculture has been our primary theme. In my own opinion, white population is a factor, it is not a critical factor in Africa’s agricultural crisis. Population growth, after all, has taken place in Asia and Latin America, in effect, throughout the whole third world, and yet these regions have not experienced the kinds of food and agricultural problems we have seen in Africa.

From my point of view, we will have to deal with factors other than population first. While there is high population growth, it is due to high levels of poverty and not the other way around. The other factor is that population growth could be turned to an advantage if the right policies were in place, if there were more positive economic choices in place. Unlike other agencies such as multilateral donor institutions and such private institutions as the Ford Foundation, I do not see population as as important as the kinds of structural issues which we have been discussing this morning. The World Bank now has virtually put its case on population. The government of Ethiopia is being pressured by the Bank to focus on population growth as a pre-condition for future participation by the Bank in its development projects. I think this is a bad idea.

Mudiumbula T. Futa, The African Development Bank. I think that I would agree with my colleague, Dessalegn. The population issue is a very complex one. I do not think that we can find a solution now, particularly given the divergence in points of view of what should be done by way of policy. It is a cultural problem, but I believe that we are facing a paradox, that those institutions which have placed such importance on individual freedom are at the same time proposing policies that affect one's intimate life. Government can decide that it wants to fix population growth at such and such a rate, but it is an individual decision, as any economic decision ultimately is, and which has to be left to the individual family unit.

To me, I recognize population growth as a cultural phenomenon which will evolve together with the overall process of economic development, and I also believe that while some consider it to be a problem now, tomorrow it will probably be an advantage in the sense of market potential, i.e., population size will give us the market in the future. What is important, and what has been emphasized here today, is the importance of increasing agricultural productivity, of improving the rate of technological innovation, and these factors will, in my view, be more critical in shaping the opportunities for demographic change than policies which purport to focus directly on reducing the rate of population growth. China has a very large population growth rate. Now they are trying to find a solution to limit that growth, but for China, its solution in the near term has been at least as much its focus on economic innovation than on the sometimes harsh population control policies that have been tried.

Alyosius Amin, Pennsylvania State Univesity. A major problem is the movement of the most productive part of the population from the agricultural sector to the urban sector of the economy. Given that the active rural farming population is on the average, between fifty and sixty years old, why are so many young people moving to the cities, and what does this imply with regard to revitalizing Africa’s agricultural productivity?

Mudiumbula T. Futa, The African Development Bank. It is true that Africa’s agricultural population is aging. However, it is variable from one country to another. We are trying to take this element into account in the design of our rural development programs. When we fashion a loan, we are explicit in encouraging the retention of capable young talent as an important comporwnt in the structure of incentives that we introduce, and to point out explicitly the relative advantage of productive farming opportunities relative to the often uncertain employment opportunities in African urban areas. The answer to much of this issue has also been given by my colleagues at this table in the sense that we need to develop the appropriate incentives to encourage young people to consider agriculture as a viable economic activity. Through the right mix of incentives we hope that the balance between rural and urban population can be at least promoted in an economically optimal fashion.

Tony Hodges, Editor, *Africa Recovery Magazine*, United Nations. I was intrigued by the remark made by Ms. Damon that there is a danger in overly speeded dissolution of marketing boards. I would be curious to hear a bit more of her thinking in that regard. I thought perhaps she was referring to the overnight dismantling of marketing boards in Nigeria, which, for example, led to a lack of control over cocoa production and the price that Nigerian cocoa production could fetch on the world market, and also the danger of losing the final safety valve, the grain farmers, for example, when Nigeria’s grain harvest was extremely good about a year ago and producer prices fell extremely steep, and for which there was no safety mechanism which might have stemmed the decision by farmers to drastically cut their future production targets in comparison to what had been done previously.

The other question, which I would like to address to Dr. Rahmato, is in view of the fact that the Ethiopian government seems to have changed its agricultural policy in recent months, for example, its decision to order a ten percent increase in the prices to be paid to grain farmers by the state grain marketing board, and has also partially privatized, and liberalized, the distribution of grain in order to try to improve the distribution of grain from surplus areas to the areas in the north which are facing drought, could you perhaps explain a bit more of the background of these recent decisions, what has motivated them, whether they are just single decisions, whether they are likely to stop where they have reached so far, or whether this is part of a longer-term process involving further reforms in Ethiopia’s agricultural policy.

Jacqueline Damon, The World Bank. I think that the examples you have cited are certainly good ones. I was speaking not as a World Bank staff member, but as an individual, based on my personal experience as a U.S. AID macroeconomist in Senegal and my interactions with the CPSP (Caisse de Stabilisation et de Péréquation des Prix). The Caisse served not only as a marketing board for exports, but was also involved in food crops, and was also involved at one point in financing input subsidies for agriculture. In particular, I was discussing something for which I was a major supporter, namely rice marketing Liberalization. The idea was to get the marketing board completely out of rice importing and distribution in the country. What we found was that because of the religious structure in Senegal, and the importance of certain religious brotherhoods, notably the Mouride, that we were going from one monopolistic configuration to another, and that the religious brotherhoods had a stranglehold over rice importing and distribution. To the credit of the institutions involved, we did go back on our conditionality, and allowed the CPSP to continue to play a role in stabilizirig the market.

Dirck Stryker, Tufts University. I would Like to make a comment on the Nigeria case, since I was there shortly after this dismantling occurred. in 1986, when they disbanded the commodity boards overnight, it was quite an extraordinary achievement. However, the quality of cocoa did deteriorate following the dismantling of the board in June, just prior to the cocoa harvest in September, and there was not much time to organize a market. I do not think that this deterioration occurred the next year. The reason why it did not is that cocoa farmers organized themselves, and cocoa purchasers from overseas helped to organize quality grading. When I was in Nigeria in 1987, it seemed fairly clear that the same problem was not going to occur the foltowing season.

With respect to the grain board, just before it was disbarxied, it had for years been unable to effectively support the officially fixed grains price because the guaranteed minim;um price was set wait below the market price. In fact, even though the market price had dropped in Nigeria when I was there in 1987, it was still not down to the Level of the minimum price that had previously been in effect. Furthermore, Nigeria is such a huge country that the capacity of the grain board to purchase was so Limited that it could not possibly have had much of an effect.

Dessalegn Rahmato, Institute for Development Research, Addis Ababa University. What appeared as policy reform a few months ago in Ethiopia was not even much of a policy reform. It was a concession to external agencies who had been pushing for liberalization of the food marketing system as wait as some of the agricuttural policies of the government. Two aspects were involved here. one was the attempt to placate Ethiopia’s external sources of credit, notably the World Bank, and the EEC countries, who for years had been insisting on liberalizing the food marketing system. The other was the fact that the black market was playing an increasingly important role in the distribution of food, and was making it difficult to maintain controls through officially sanctioned channels of distribution.

The concessions that were made were more symbolic than substantive. It appears as though these changes were major when you took at them in percentage terms, but in actuality, it turns out that they have been very small. As I see it, and I hope I am wrong, these changes do not suggest anything more than minor concessions in order to obtain foreign assistance. The obvious way of doing so would be to give the minimal level of concessions as a means of restoring international credit flows to Ethiopia.

Phillip LeBel, CERAF. At this point, we should now break for lunch. Before we do so, please join me in thanking our panelists for the presentations that they have made this morning. I would Like to emphasize that we hope to extend the dialogue we have now joined. Following the keynote address of Mr. David McAdams, we plan to continue the discussion into the early afternoon.

Richard Lynde Acting President, Montclair State University. I am especially pleased that we are discussing this particular issue today. it is an extremely important one, and one that does not reside solely in Africa. It touches all of our lives. I hope and trust that the program you had this morning was very informative. I know that the speaker this afternoon will enlighten you as well.

I just wanted to take two moments to thank Phillip LeBel for everything he has done to put this program together and, indeed, to put the Center together. It is a very important activity at Montclair State University. It helps the college reach out and broaden the perspectives of both the faculty and students. I also want to thank Suresh Desai, the Dean of the School for his fine support of this program as well. Welcome to Montclair State University and I look forward to being able to listen to at least a part of this speech this afternoon. Thank you.

Keynote Address

David McAdams, United Nations Development Program. First I want to thank Phillip and Dean Desai for inviting me today. When I looked at the title of today's conference, and as I listened to the members of the panel this morning, nobody seemed to opt for a choice. This made me reflect on some of the experiences I have encountered over the years. When I was with U.S. AID, as country director in Senegal a few years ago, one government official asked us to provide an advisor, an economist, but they said they wanted him with one arm. We said, “Why”? He said that every economist you sent earlier, each time we asked him something, he would say “On the one hand, this, and on the other hand, that”. As Phillip was driving us here this morning, we said to him: “Look, we all know that if we lay all the economists in the world end to end, they would never reach a conclusion".

Actually, it is not unique to be disrespectful of economists. The most popular sport in any meeting that has anything to do with development today, if there are any Sub-African representatives, the object is to bash the World Bank, and particularly to bash the World Bank on structural adjustment. Nobody ever mentions that African states are themselves members of the Bank. They also vote on Bank policies. Bank staff don't impose policies on their members.

The other thing that struck me this morning was that nobody mentioned debt. All of these choices are influenced by debt. When a financial institution such as the World Bank responds to a request for consideration of a loan by one of its memberss, a request that by definition cannot be refused, once the project has been appraised, the first question that must be addressed is whether one is dealing with a good client. Is the client creditworthy? Most of the discussion this morning seemed to ignore the fact that it is goverrments who are usually responsible for ultimately having to repay the kirds of loans we have been describing. Regardless of whoever is investing, governments will usually have to decide whether this project is viable and whether government can pay back the debt to whoever is willing to lend, which in turn implies what level and form of taxation is justified to go forward with the project. Repayment obligation limits choices, no matter what the demand.

Now if the question is humanitarian, then you do not go to banks for an answer. You go to donors, you go to the international community, and you say: "We are struck with a kind of situation that exists in Ethiopia, that exists in Angola, that exists in any number of countries, complicated by political reasons. We want humanitarian aid, which is grant aid.” But I am assuming we are talking about development policy, which is going to pay its own way.

Just to briefly sketch over a bit of history - when I started college after the Second World War, the general principle regarding international reconstruction and development was that any economic or social problem could be solved by the transfer of capital. This was later refined as the transfer of capital and technology. And, really, the reason why this kind of seminar exists, and is needed today, is because of the dramatic failures we have seen in terms of what we have been doing, both on the bilateral basis, on the multilateral basis, and on a non-profit basis. I say this, having worked in the same business. I like to call it a business because it is tested by different criteria, for the Ford Foundation, for the U.S. government, and now for international organizations.

What really struck me this morning was that we evidently did not emphasize the kind of progress that has been made, in fact, that Africa has really not gone down the drain. All too often, to build lip support for Africa's economic recovery, to build up interest in the special sessions of the General Assembly on the problems of Africa, there is a tendency to emphasize only the negative.

After all has been said and done about the failures of development, we should also take stock of some very basic accomplishments. For example, tremendous progress has been made in education, in the reduction of infant mortality, in providing better sanitation, to cite but a few. When I went to Zaire on July 30, 1961, within six months I knew all the university graduates who were Zairois. I knew them personally, because there were only thirteen of them at the time. Today, there must be thousands of Ph.D.'s, and more are being produced every year. So there has been enormous progress, and we sometimes forget to talk about that. We also forget to talk about the fact that much of this success has been due to the efforts of all of the international community, the NGO'S, missionaries, and by governments themselves, but most of it actually was designed and generated inside the country.

Why have we been successful in water for human consumption, in reducing infant mortatity? Why have we been successful with sanitation? Because these are things that are labor intensive, that require a definite involvement of the beneficiary in terms of design, because it requires his cooperation in order to succeed. Whatever we may say about the failures of development in Africa, the prospects for positive change are going to require a good deal of rethinking. It is going to require the development of a greater sensitivity to the fact that development is a long-term process. Structural adjustment, and I think Jackie Damon will agree with me, is to date a short-term process. The average loan is three years, which means that most of our current efforts reflect a short-term approach.

Many of the positive structural changes that are possible in Africa must inevitably be undertaken within a long-term perspective. This long process has been going on since, say, 1961. The process has also been accompanied by the development of very specific elites, at least in countries I know in Africa. These elites have very special interests, and they also have a great deal to say in the decision-making process. Many of the criticisms I hear, criticisms of donors and donor processes, also apply to goverment officials and to specific individuals, even to those outside of government. Jackie Damon touched this morning on the power of the Mourides, the Confrérie des Mourides, in Senegal. Similar conditions are found elsewhere. I know a lot about Zaire. I Lived there for five years. I know a lot about the Ivory Coast, where I also Lived for a number of years. I presently work with Southern Africa, and I know Zambia and Zimbabwe. We know that in Zambia, structural adjustment has posed very delicate political pressures.

The fact still remains that in all of these countries where you have structural adjustment programs, some of the people who are hurt most immediately are the civil servants, the middle class. In terms of impact, of course, the most vulnerable seem, on paper, to be hurt. But in fact, I do not know of any country, including Zambia, where I have been dealing with, that has a structural adjustment program where, almost immediately after having signed that letter of intent, government policy begins to backtrack.

To give you an example, in Mozambique, the issue is who pays for a certain clinic visit, who pays for certain school books. Obviously, in most of the areas where the one million eight hundred thousand displaced persons are resettled, how can you ask them to pay for books when they have arrived there without anything? When it comes to medical care, by and large, the poor are given free medical care. But when it comes to the civil servant, the answer is "no", because he is one of the people who actually got the (structural adjustment) rules negotiated. You can find the same thing in Malawi, and the same thing in Zambia. Of course, it is not popular to speak out in defense of the elite, but I think this is one of the very serious problems created by structural adjustment programs, and which probably contributes to the political unrest, although in a much more subtle way than it first appears. These are, in effect, some of the issues that I noticed which were not addressed this morning.

You all know the policy issues that were addressed today. They were pertinent. I would have liked to have seen perhaps a more honest approach to the population problem. I think probably we should not call it a population problem, because it is a demographic problem. It is not a question of how many children you are going to have, or whether you are going to have children at all. It is a question of looking at the age ranges that exist in countries and the tremendous demands are being made on social services, on education, on things where the productivity returns come at a much later date, and really decide whether one can plan for this, or simply let the free market decide, or what have you. The fact remains that China did approach this question thirty years ago in a very harsh way, although they have become much less harsh today.

It is not a question of changing people's attitudes. It is a question of awareness, of what the responsibility shall be and in what direction one is to go. From my knowledge, various traditional birth control methods have existed in Africa for centures. It is not a question of knowing how to prevent pregnancies. It is a question of trying to relate what saw of the speakers call equity, or social justice, that the policy regarding population growth is one of social justice. It is not of one tribe, or group, telling somebody else how many children one can have. It is one of explaining what the options are.

The other message that the panel got across, rather clearly, I think, is that structural adjustment is not a theology that one just bows before. The people with I deal with the Bank believe that it is a theology. They believe that it is a short-term effort to try and reverse the trend. And these trends are not just a question of price policy. There are many situations, such as the one in southern Africa, where the disruption of the Beira corridor, the disruption of the Benguela railroad means that Zambian copper, Zairois copper costs eighteen percent more when it gets to the market because it has to go through Capetown or Durban ports. It means that South Africa makes a lot of money on having everything diverted from Zimbabwe, from Zaire and Zambia through their ports. It creates a dependency situation, which has always existed, which SADCC (the South Africa Development Coordinating Countries), and other regional groupings such as the Preferential Tariff Area(PTA), are trying to dismantle, but the reality is that you can not dismantle. A good deal of our food aid destined for the countries that are being stabilized by South Africa goes through Durban and Capetown. It is cheaper and more efficient. And it gets there with a significant degree of certainty and reliability.

To give you an example, the Benguela railroad, from Shaba to Lobito, which ultimately connects with Zimbabwe and Malawi, as late as 1972, when it was still operating, made a net profit of $90 million dollars a year. It was a profitable operation. The four countries involved, Zambia, Angola, Zimbabwe, and Zaire, have now decided on joint ownership of that railroad, in an effort to prevent further losses stemming from commando raids sponsored by South Africa. In the Beira corridor there is some $400 million pledged for rehabilitation, mostly by the Nordic goverrvnents. This corridor is Like the Suez canal for at least seven countries in southern Africa. A concrete example is Malawi, which had a two percent growth rate in 1984, and a negative growth rate this year. Why? Because their exports, tobacco, sugar, cost twenty-five percent more to export because it has to go 1,000 kilometers more to the south, to Durban, to get out and get to Europe, which adds even additional mileage.

What are we to make of these examples? All of these institutional factors affect structural adjustment Loans. What they tell us is that many of the problems of structural adjustment are tied to external factors. Now what is the role of the UNDP in all of this?

First, many people do not realize that the UNDP is a funding organization. Yet we like to think of ourselves as more of a development organization because we do not fund capital development except in a very limited sense. We have for the next four years a budget of approximately $1 billion. We operate on five year program cycles and each country gets an envelope at the beginning of the cycle based on income per capita, revenue, and population. Once we divide up these funds, the idea of corditionality is extremely relevant. It is not that we do not have conditionality, but we do not have the kind of bank staff, and in that sense we deal with the goverrvnent in terms of their priorities and in a sense, their set of rules, which applies to all of the UN organizations.

The other aspect which makes conditionality credible is the fact that our contributions are not based on assessments.They are based on voluntary contributions. Everyone contributes to us and gets what he needs. If he does not contribute, it does not mean that he can not benefit from our programs. So that is a different aspect.

Now governments tend to view the UNDP as an alternative answer to perhaps a bilateral donor since we do mostly pre-investment, feasibility studies, and we do primarily technical assistance, transfer of technology. Most of them tend to want us to give an alternative view. And now we are coming under criticism because we are considered to be spending too much time getting to close to the positions of the World Bank, the Bretton Woods institutions. Jackie (Damon) mentioned a program that we are jointly financing with the Bank to steady the impact of the structural adjustment programs on the most vulnerable groups in the society.

Probably the organization that has the most combined resident know-how and information is the Bank. It would be virtually impossible for us to do a credible study of structural adjustment without access to their data bank and the issue is not, as we see it, to discredit the Bank to improve the programs. I think this concern of governments has led us to organize some very special meetings with ministers of planning in the Africa region over the period of the next six months, to really discuss with them in a very open way just where we are going and also how we can adjust our policies and programs to fit their concerns.

One of the other things that we are concerned about, and this is part of structural adjustment programs, but which was not really mentioned here, was what I used to call the Reagan administration efforts to get repayments for our multinational banks who have overextended themselves in some of the developing countries. This concern with private sector, with privatization, trade liberalization, which are not really necessarily part and parcel of every structural adjustment program. Somehow, when you get into the negotiating forums, and you begin to discuss it, it becomes part of the process. When you see the whole appeal to grass roots, and to nongovernmental organizations, sometimes the negotiation takes on the flavor of privatization.

The positive aspects that Dr. Futa mentioned in terms of design and making sure that you actually responding to something that is realistic and people are going to support is lost in this whole promotion of the private sector. And that gets very complicated in Africa when you define what is private sector. Right now we are trying to sponsor a mmber of seminars in almost all of the African countries. We find that more and more goverrmmt officials will show up at private sector meetings, but the same goverment officials say "We have a private sector." All this means to me is that a great number of civil servants in Africa are involved in the private sector. It is not corruption. It is simply that the more you rise in the society, the more is expected of you by your parents, your relatives, and the more that is expected of you, the more ways you have to find of satisfying their needs. There is some evidence that that this phenomenon also happens in New York City goverment.

I just wanted to touch on those particular efforts, and to share with you the fact that we at UNDP, while we have always been thought of as independent, are now under attack from our beneficiaries for having been engaged in too much “co-habitation” with the enemies of social justice, i.e., the World Bank, the IMF, and other multilateral instititutions. I do not want to exaggerate. I was just with the administrative head of UNDP in Zambia, in Zimbabwe, Mozambique, and Malawi. It was constantly pointed out to us by high tevel government officials that we were to go back and be their intermediary, *interlocuteurs valables*, with the World Bank, in terms of getting these institutions to understand that Africans recognize the need for economic reform programs, that they do not Like being beggars, they do not like going back rescheduling debt, but they want to do it their way. Their way has another dimension which we sometimes tend to overtook. President Kaunda wants to be re-elected. I see his problem. So whatever economic formula you come up with, he wants to be able to blame you if it doesn't work, and if it works, he wants the credit. It is this institutional reality that will ultimately shape our efforts to tack the problem of sustainable agriculture in Africa. Thank you.

Phillip LeBel, CERAF. Let me use this opportunity to open up the discussion to questions once again from members of the audience, either to Mr. McAdams, or to members of the panel who are still with use from this morning.

Jerome Wells, University of Pittsburgh. I am an historian doing work on the economic history of development policy in Africa. I find an emerging split between the work I do and the work we do here, and what I see when I come home at night. I spend my days asking questions about improving agricultural productivity, and how improved agriculture goes hand in hand with improved industry.

I also took at what happens when you have a little more rapidly growing population - apparently it turns out that your agricultural output goes up a little faster. As a result, people usualty wind up saying reasonable things like: "We think output in agriculture went up pretty well in the Ivory Coast, and we think it went up not so well in Nigeria", and so on. Then you see the evening news, and you see Africa in very different terms, in tragic terms. You really do feel that things are hopeless, that sit you are doing is just re-arranging the deck chairs until the Titanic sinks.

If you Listen to what has been said today, especially with what we have just heard, that there is something that we technical types, we economists, ought to think about. It is that one has to see first the political reality before you design any kind of development policy. If you look at the African experience in terms of this institutional reality, then maybe the kind of split I have been talking about would not be so great. Maybe we need to consider what historians, someone with a longer view, can contribute to the dialogue, that development policy has not been simply an investment in short-term structural adjustment, even though it was and is a matter of continuing international concern. It seems to me that maybe we need a fresh took at some of the other aspects. In short, what political aspects should we, as scholars and practitioners, pay attention to in the design of appropriate development policies?

Dessalegn Rahmato, Institute of Development Research, Addis Ababa University. Maybe we should call upon the historians, but I think they have the same problem, too, just as the economists, the sociologists, and others confront. My discipline is political science, and I can not answer this question. Political science really does not give you the answer.

I can only put it in the following way. Choices have been made to deal with these problems, essentially in three forms. There is the standard, orthodox Marxist, or rather I should say, the Stalinist, choice, for countries like Angola, Mozambique. There is an attempt to mix both the Marxist tradition and what is called African socialist tradition, and that was what Tanzania essentially chose to re-orient its system. Thirdly, there is a more crudely market-oriented, capitalist type of approach, which has been employed by countries such as Nigeria. So you really can not answer this question straight out and say: "This is it."

The emphasis in my discussion, which unfortunately I did not have enough time to develop, or go into in more depth, was to go back to the rural experience, not so much in terms of political theory, or economic theory, but in terms of performance, in terms of hard practical, common sense. I think that there is a rich experience there from which we can learn much about appropriate agricultural policies.

Phillip LeBel, CERAF. I would Like to offer an observation. During the course of our discussion this morning, the question of risk pervaded many of the examples that were presented. it is often been said that risk is a problem that is peculiar to agriculture. Now can a farmer manage risk? Goverrwent officials often appeal to farmers' aversion to risk out of self-interest. Rightly or wrongly, if government officials can persuade farmers that they can reduce risk, they gain political support for staying in power.

Now farmers are also very rational. The farmer also wants to eat during bad years as well as good ones. Given some of the disappointments wrought by well intentioned but poorly administered government farm programs, the question is: Are there unexplored market based opportunities with regard to the management of risk? I think it is fairly widely accepted that there is no way that governments, by edict, can eliminate risk.

J.D.Von Pischke remarked this morning that credit does not necessarily solve farmers' problems, that in effect, through non-financial intermediation of "goods-to-goods" transactions, savings and consumption decisions can be made fairly efficiently. Yet for economies wrestling with a reduction or elimination of market stabilization boards, should there not be some attention paid to what might enable African farmers in the aggregate to respond more efficiently to global agricultural price and quantity fluctuations?

If government is to reduce its role in agriculture, one way of justifying such a move is to foster the development of futures markets, or forward markets, in commodities that would enable producers of crops that are going to be sold on the international market, to take advantage of them. One of the things that struck me is that we have relatively well developed financial markets in regard to certain agricultural commodities, notably grains such as soybeans, wheat, and corn, but that for so many commodities on which African countries are not, these markets are very thin, or frequently off-shore markets, i.e., not anywhere near the immediate points of production. Without such financial innovation, much of the risk to which African countries find themselves exposed might simply serve as a convenient excuse to perpetuate some of the inefficient policies of the past.

David McAdams, UNDP. We are trying to involve women in almost every one of our projects. We go through a rigorous exercise to identify the beneficiaries, particularly women, for very obvious reasons.They are responsible for a major part of food production in Africa. As one initiative, we are looking into the idea of putting in revolving funds for agricultural production. Our focus is now to get the people who are involved with the use of such funds to participate in setting the criteria as to who will benefit from them.

Another thing I would like to note is that I sense that many of the governments, and I think Dr. Rahmato would agree with me, particularly in Mozambique, Angola, and in some of the other countries that have opted for centralized state collectives, that they themselves reached the conclusion before the Bank appeared on the scene, before structural adjustment, that they had failed in trying to take people from subsistence agriculture into a kind of Tennessee Valley, highly irrigated, highly mechanized, and centrally controlled system.

In Chokwe, Mozambique, 35,000 hectares of irrigated perimeters, were simply divided up as government officials said to all of the people living in the area: "O.K., you have your own land, you can work it as long as you pay the appropriate user costs." This is also a region where a lot of the males go to South Africa to work in the mines, so what you have out there is mostly women. The government did not introduce this, but because of the migration of males to South Africa, in Chokwe they have women working for other woman. Now what do we need in that area for credit? You do not need credit to raise rice. Without it, they went from 25,000 tonnes Last year to 40,000 this year. What they do need is other activities, other services, such as people to repair equipment, things that actually make this a more balanced economy. That kind of credit is needed, and there are people who are asking for it.

There is a lesson from Chokwe, and it is that success is based partly on experience, or lessons learned, and that the mere dimensions of taking someone from subsistence agriculture is like taking a bicycle and putting it in a robotic plant. It just does riot work. And they failed at it. Now they are re-designing their approach, and it was not the Bank, but the Mozambicans themselves who undertook the initiative.

J.D. Von Pischke, The World Bank. it would be very mice if everyone could design a financial package that would deal with risk. In certain countries, not so much in Africa but etsewhere,.there is crop insurance. It has, by and Large, been a tremerxious failure. It has been weak on equity grounds, and it has been weak on efficiency grounds. it is also very costly. Diversification, as our speaker just said, is extremely important. However, I find the whole risk bearing system in Africa tremendously robust, that these societies have for years faced tremendous risks and they have structured themselves in such a way that risk is widely spread, and according to standards which I think just about anyone could accept.

The fact that these risk-sharing systems are so strong in Africa may make it difficult to do certain things. For example, in Ghana, where I have just spent several weeks, the use of modern credit discipline, if you will, which ultimately has to be reflected in separating someone from their property when they refuse to pay, is inapplicable. You simply can not do that in Ghana, or, for that matter, in most parts of Africa. Why riot? Well, risk is one thing and also the social relationship that goes with this is another. I talked to rural bankers and they have 117 rural banks in Ghana. Accordingly to the way I learned finance, the quality of a loan is based to a large extent on your payment performance. A good loan is one that is being repaid, and a bad loan is where there are problems.

The Ghanaian rural bankers did not at all accept the western notion of what constitutes a good loan. As far as they were concerned, as long as the borrower was in good books socially, with the people in the area where the rural bank was located, it was a good loan, even if it was never repaid. As long as one fulfilled one's social obligations such as sending periodic remittance to village relatives, holding periodic feasts, and other forms of social interaction, even if the individual was not paying the loan on time, it was a good loan because it had the full faith and backing of the community. What, then, is the problem? Is it our conception of trying to get them into modern credit, or their problem, that they simply do not understand. Well, I think we have to see what can be done within the traditional system, and how the risk-bearing capacity can be strengthened.

Also, let me say a word about political aspects. Every year I go to a rather large Asian country where they have a college of agricultural banking. Over the years the discussions that I have had with the staff of the college have been very interesting. Their system has become increasirigly politicized, and every politician in that country has his finger in the credit system to some extent. For example, there are bizarre loan sales that are presided over by chiefs of districts, and farmers are encouraged to apply for loans. When things get rough, there are wholesale amnesties, not unlike what occurred in Senegal.

When I first went to that country, there was a good deal of enthusiasm on the part of the staff of the college of agricultural banking. They contended that credit was the new wave, that it was eradicating poverty, that it was reaching into rural areas that had not been reached before, and that it was increasing production. Now they are singing another song. Mind you, these are technicians, good bankers in a country with a tremendous banking tradition. Yet, they have been disenfranchised. There simply is no technical solution to a political problem, and these banking specialists are out of the action. They are not part of the solution, such as it is.

Suresh Desai, Dean, School of Business, Montclair State University. The country he is referring to is India. Rather than comment on the College of Agricultural banking, I would like to offer a few broader remarks. The developmental model that we are following, and which international development agencies are helping countries to follow, really creates a society that could provide what is defined as a good life for what I would say is a maximum of fifteen to twenty percent of the population. For the rest it is impossible to do provide a good life unless society is willing to embrace an unacceptable level of environmental destruction.

The question then comes up that if you really follow the price policy, or "price-ism", as Michael Lipton says, you are going to create both income and wealth inequality in African countries, or in any other country in which you try to implement such a policy. With higher prices there is no guarantee that one wilt have increased agricultural output.

The impact of price policy will vary according to the country and crop. Agricultural price supply elasticities are very low, and if complementary inputs are not available, then increases in output will not take piece in response to increases in prices. But apart from that, it is the upper class that has access to credit, and who will be able to take advantage of all the facilities that we, as development institutions, are providing. It is thus the upper classes who will be the primary beneficiaries.

Because of the increased economic power that accompanies increases in real producer incomes, wealthier farmers are able to buy land from marginal farmers, increasing the number of rural people who will be dependent on buying food rather than producing food for their own consumption. In India, nearly half of rural households are net purchasers of food. Higher prices may not lead to increases in agricultural output and end up hurting the rural and urban poor through increases in income inequality. The tilt in favor of the agricultural sector may spell the relative discouragement of other sectors, with the result that the overall impact on development may be the opposite of what we had hoped to achieve. The dichotomy to which Jackie (Damon) referred before between urban and rural populations, I think, is wrong. It is the dichotomy between the elite and the poor that is important.

Both rural poor and urban poor are going to suffer in the process of structural reforms of the kind we have been discussing. India has developed a vibrant economy over the last forty years. There has been important progress in education, in transportation, in producing different kinds of goods, and progress in acquiring managerial expertise, and in developing appropriate financial institutions. The question comes up, as David (McAdams) has pointed out, once you bring up all of the dynamic, vibrant progress in education, in transportation, in producing the different kinds of goods, progress in acquiring managerial expertise, and in developing appropriate financial institutions. But the vibrant economy cannot provide what we call this good life to more than fifteen to twenty percent of the population. Now how do you distribute this income? Who will get it? What coalition will capture this wealth? That is where the political process comes in.

It is through the political process that we see efforts to correct for the mal-distribution of benefits from development projects. The politicization of agricultural banking in India, cited by J.D. Von Pischke, is one example. It can sometimes be a rather nasty process, because it is a political process of redistributing wealth. You may not agree with it, but that is one way. The other way, which is through violence, of the kind we have been seeing in India Lately, which forces the goverment either into a totalitarian response or into anarchy. I think policymakers and economic analysts should understand and take cognizance of complex political interest groupings that lie behind the policies of market intervention. The policy package that is developed without such an understanding is likely to be irrelevant or destructive to the socio-political fabric.

When we determine what kind of agricultural policy we want to follow, somehow at this juncture, we must address a basic question. Africa has the opportunity to develop a more just, more egalitarian, economy in the future. If you blindly follow the policies the western institutions are recommending, and the experts, including myself, as I am the product of a liberal education, are recommending, you are going to find a political calamity in the long run, twenty to twenty-five years from now. Yes, there will be more of a police state, more violence, and it is time that intellectuals from Africa independently devise a different kind of policy package which would lift from forty to fifty percent of people who are below the poverty line into the economic mainstream. Otherwise, the increases in productivity will be claimed by a disproportionately small share of the population, creating the seeds of future discord.

There is no way that in the twenty-first century the poor are going to be quiet. So my question to these policymakers is: Is there any way we can develop appropriate policy packages for sustainable agriculture which will guarantee reasonable food consumption to all human beings because they are human beings and they deserve it.

N.M.Mawampanga, Penn State University. I can not claim to have an answer to the question just raised, but I would like to pose another. One problem with the structural programs we have been describing is that when cxjtside experts come in to a country, they are often restricted in terms of their ability to employ Local personnel, and to involve Local personnel in a project. Because the outside personnel often are not familiar with Local conditions, they have to spend a lot of time and resources learning about the tocal conditions, which increases the ackninistrative costs of the project. Since the Local country ultimately is faced with the obligation of repaying a lot of the costs plus interest of the project, why is it that more local expertise can not be used'? If development is to succeed, local people have to become involved right from the start so that after the project has been completed, locally experienced individuals can take over and manage the program successfuily.

David McAdams, United Nations Development Programme. You have raised a very good question. It is the second item on the agenda of the series of meetings that we are going to have with the African ministers of planning before the end of 1988. It is one of their major concerns. As you know, in UNDP we execute very few of our own projects. We use the UN system as the executing agency, including the Bank. If it is an FAO (Food and Agricultural Organization) project, the government and FAD will execute the project, and we play a technical upport role. We have noticed that over the years the general principle was to recommend three candidates for each post. The agencies are now submitting only one and countries have been complaining that they are not being given a choice.

The use of national experts has been for at least the past eight years part of UNDP policy. The other policy is what we call government execution, where the government can actually be the executing agency. Then the government can choose their own consultants. So we are in absolute agreement with your suggestion, we and the governments also feel that it is cheaper, because we pay the national expert along the lines of what national consultants are paid. Essentially, as we get into more and more projects using women in development, we have to use more and more national experts because there are very few people from outside who are knowledgeable in these matters. This is one of our major priorities.

Phillip LeBel, CERAF. I think this is a good way to bring our discussion to a close. I want to thank David McAdams and all of the panelists for being our guests today. I hope that this conference has helped you all to think about some of these issues in a productive way. Thank you for coming.

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Appendix A

Table 1

Basic Economic Development Indicators

	Population 1988, millions	Annual Growth Rate, 1987-2000	GNP per capita $U.S.1987	Annual Growth Rate, 1980-1987	Life Expectancy at birth, in years
Sub-Saharan Africa	451.2	3.10%	$330	-2.8%	51
Excluding Nigeria	344.5	3.10%	$330	-1.2%	50
Low-Income Economies	397.3	3.10%	$270	-3.6%	50
Excluding Nigeria	290.6	3.10%	$240	-2.2%	50
Ethiopia	44.8	3.10%	$130	-1.6%	47
Chad	5.3	2.60%	$150	2.4%	46
Zaire	32.6	3.10%	$150	-2.5%	52
Guinea-Bissau	0.9	2.10%	$160	0.8%	39
Malawi	7.9	3.50%	$160	0.0%	46
Mozambique	14.6	3.20%	$170	-8.2%	48
Tanzania	23.9	3.40%	$180	-1.7%	53
Burkina Faso	8.3	2.90%	$190	2.5%	47
Madagascar	10.9	3.00%	$210	-3.7%	54
Mali	7.8	3.00%	$210	0.7%	47
The Gambia	0.8	3.00%	$220	0.8%	43
Burundi	5.0	3.20%	$250	-0.2%	49
Zambia	7.2	3.50%	$250	-5.6%	53
Niger	6.8	3.20%	$260	-4.9%	45
Uganda	15.7	3.30%	$260	-2.4%	48
Sao Tomé & Principe	0.1	2.50%	$280	-6.0%	65
Somalia	5.7	3.00%	$290	-2.5%	47
Togo	3.2	3.10%	$290	-3.9%	53
Rwanda	6.4	3.80%	$300	-1.0%	49
Sierra Leone	3.8	2.60%	$300	-2.0%	41
Benin	4.3	2.90%	$310	-0.6%	50
Central African Republic	2.7	2.60%	$330	-0.7%	50
Kenya	22.1	3.90%	$330	-0.9%	58
Sudan	23.1	2.70%	$330	-4.3%	50
Comoros	0.4	3.40%	$370	...	56
Lesotho	1.6	2.60%	$370	-0.9%	56
Nigeria	106.8	3.00%	$370	-4.8%	51
Ghana	13.6	3.00%	$390	-2.0%	54
Mauretania	1.9	2.70%	$440	-1.6%	46
Liberia	2.3	3.00%	$450	-5.2%	54
Equatorial Guinea	0.4	2.30%	...	...	46
Guinea	6.5	2.40%	...	...	42
Middle Income Countries	53.9	3.20%	$870	0.3%	53
Cape Verde	0.3	2.70%	$500	1.2%	65
Senegal	7.0	3.10%	$520	0.1%	48
Zimbabwe	9.0	3.00%	$580	-1.3%	58
Swaziland	0.7	3.20%	$700	1.2%	55
Côte d'Ivoire	11.1	3.60%	$740	-3.0%	52
Congo People's Republic	2.0	3.60%	$870	1.7%	59
Cameroon	10.9	3.20%	$970	4.5%	56
Botswana	1.1	2.30%	$1,050	8.0%	59
Mauritius	1.0	1.10%	$1,490	4.0%	67
Gabon	1.1	2.60%	$2,700	-3.5%	52
Seychelles	0.1	3.00%	$3,120	1.3%	70
Angola	9.2	3.00%	...	...	44
Djibouti	0.4	3.00%	...	...	47

Source: *Sub-Saharan Africa: From Crisis to Sustainable Growth* , A Long-Term Perspective Study (Washington, D.C.: The World Bank, 1989), pp. 221, 269.

Table 2

Africa's Share of Global Commodity Exports

	1970	1980	1987
Total Non-fuel	9.1	5.3	4.1
Live animals, meat	3.7	2.3	1.6
Bovine meat	2.6	0.9	1.0
Fishery commodities	3.1	2.9	4.1
Coarse grains	1.5	0.7	1.7
Bananas	12.2	12.6	13.0
Sugar	4.5	5.2	5.5
Coffee	33.6	24.1	19.9
Cocoa beans	72.6	61.6	58.7
Tea	9.5	9.9	10.6
Spices	15.0	6.7	5.8
Groundnuts	27.7	24.3	21.1
Palm oil	57.3	27.3	18.4
Tobacco	3.4	5.2	4.8
Natural rubber	7.5	5.2	5.7
Non-coniferous timber	7.1	6.7	5.9
Cotton	11.0	8.3	7.9
Sisal	47.7	31.8	25.5
Bauxite	5.6	17.0	19.6
Bauxite (actual weight)	5.2	15.6	18.5
Alumina (aluminum oxide)	2.9	2.0	1.5
Aluminum	1.6	2.2	2.5
Copper ore	17.9	14.8	12.9
Unrefined copper	18.2	14.3	12.9
Refined copper crude	10.6	8.2	7.3
Iron ore	7.7	4.0	3.7
Phosphate	22.5	21.5	23.4

Source: *Africa's Commodity Problems: Towards a Solution* , Report by the United Nations Secretary General's Expert Group on Africa's Commodity Problems. (New York: United Nations, 1990), p. 120. Data are based on UNCTAD sources and include both North Africa and South Africa.

Table 3

Africa Basic Environmental Indicators

	GDP per capita $U.S. 1987	Urbanization Rate, 1988	P.Cap. Forest and Woodland in ha., 1988	Deforestation Rate per year 1973 to 1988	Per Capita Food Production Index 1979-81=100 1989
Africa	$1,187	41	1.17	-0.46	93.13
Algeria	$2,633	51	0.20	1.08	92.64
Angola	$1,000	36	5.58	-0.17	80.28
Benin	$665	53	0.79	-1.32	122.44
Botswana	$2,496	33	0.80	0	68.57
Burkina Faso	$500	12	0.78	-0.83	113.61
Burundi	$450	11	0.01	1	88.2
Cameroun	$1,381	60	2.25	-0.43	95.3
CAR	$591	55	12.79	-0.03	89.67
Chad	$400	44	2.39	-0.6	98.22
Congo	$756	50	11.16	-0.1	96.28
Côte d'Ivoire	$1,123	55	0.49	-5.51	92.02
Egypt	$1,357	55	0.00	0	107.13
Ethiopia	$454	17	1.00	-0.11	88.74
Gabon	$2,068	54	18.18	0	78.62
Ghana	$481	38	0.59	-0.8	94.99
Guinea	$500	33	1.49	-0.88	110.92
Kenya	$794	32	0.16	-0.78	102.66
Lesotho	$1,585	28	1.18	0.34	71.66
Liberia	$696	52	0.88	0	91.7
Libya	$7,250	76	0.16	1.42	110.34
Madagascar	$634	32	1.33	-1.01	92.38
Malawi	$476	21	0.53	-1.28	85.77
Mali	$543	23	0.95	-0.45	99.38
Morocco	$1,761	56	2.74	0.04	125.33
Mauritania	$840	54	0.63	-0.06	87.15
Mozambique	$500	41	0.98	-0.67	82.47
Namibia	$1,500	66	10.23	0	92.18
Niger	$452	27	0.36	-2.09	83.82
Nigeria	$668	43	0.20	-1.84	94.79
Rwanda	$571	11	0.07	-0.56	71.66
Senegal	$1,068	44	0.85	-0.46	103.55
Sierra Leone	$480	40	0.52	-0.22	87.27
Somalia	$1,000	44	1.23	-0.55	97.26
South Africa	$4,981	65	0.13	0.56	93.34
Sudan	$750	26	1.94	-0.74	82.66
Tanzania	$405	46	1.69	-0.27	90.02
Togo	$670	33	0.39	-2.99	92.71
Tunisia	$2,741	59	0.07	0.93	88.93
Uganda	$511	14	0.33	-0.72	84.88
Zaire	$220	46	5.15	-0.11	91.71
Zambia	$717	65	3.68	-0.31	95.99
Zimbabwe	$1,184	35	2.17	0	94.29

Source: UNDP, *Human Development Report 1990*; The World Bank, *World Development Report 1990*; FAO, *Production Yearbook 1989*.

Table 4

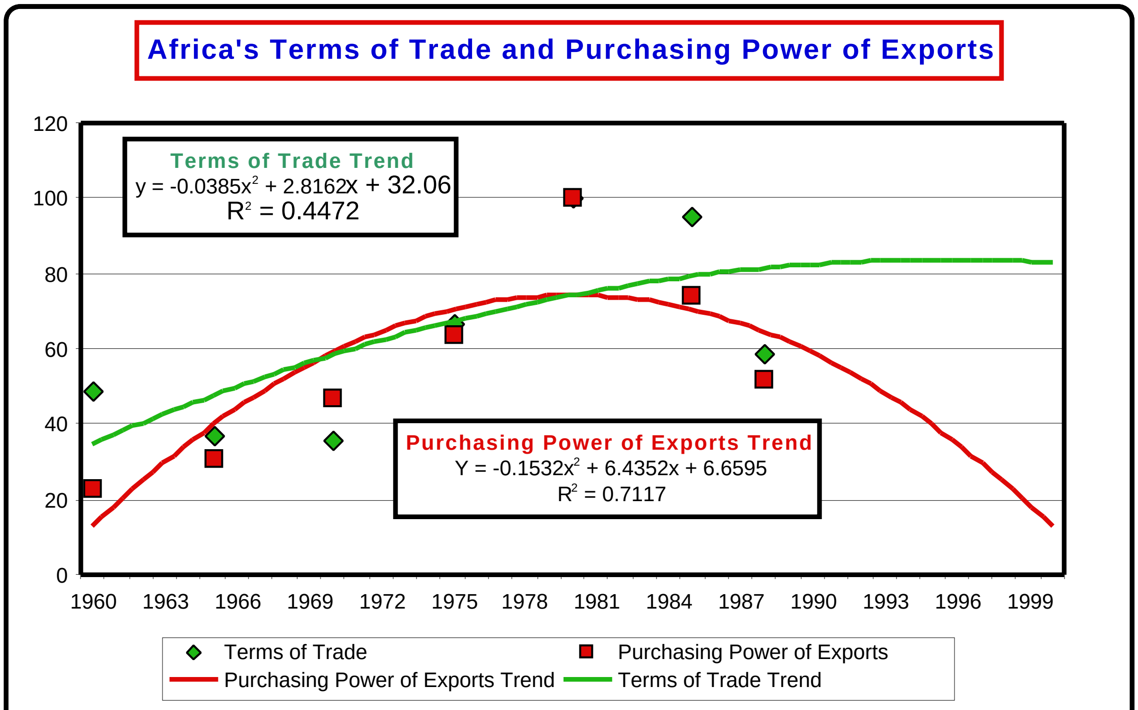
Africa's Exports of Individual Non-Fuel Primary Commodities

as a percentage of World Exports

	1970	1980	1987
Total non-fuel commodities	**9.10**	**5.30**	**4.10**
Live animals, meat products	3.70	2.30	1.60
Bovine meat	2.60	0.90	1.00
Fishery commodities	3.10	2.90	4.10
Coarse grains	1.50	0.70	1.70
Bananas	12.20	12.60	13.00
Sugar	4.50	5.20	5.50
Goffee	33.60	24.10	19.90
Cocoa beans	72.60	61.60	58.70
Tea	9.50	9.90	10.60
Spices	15.00	6.70	5.80
Groundnuts	27.70	24.30	21.10
Palm oil	57.30	27.30	18.40
Tobacco	3.40	5.20	4.80
Natural rubber	7.50	5.20	5.70
Non-coniferous timber	7.10	6.70	5.90
Cotton	11.00	8.30	7.90
Sisal	47.70	31.80	25.50
Bauxite	5.60	17.00	19.60
Bauxite (actual weight)	5.20	15.60	18.50
Alumina	2.90	2.00	1.50
Aluminium	1.60	2.20	2.50
Copper ore	17.90	14.80	12.90
Unrefined copper	18.20	14.30	12.40
Refined copper crude	10.60	8.20	7.30
Iron ore	7.70	4.00	3.70
Phosphate	22.50	21.50	23.40

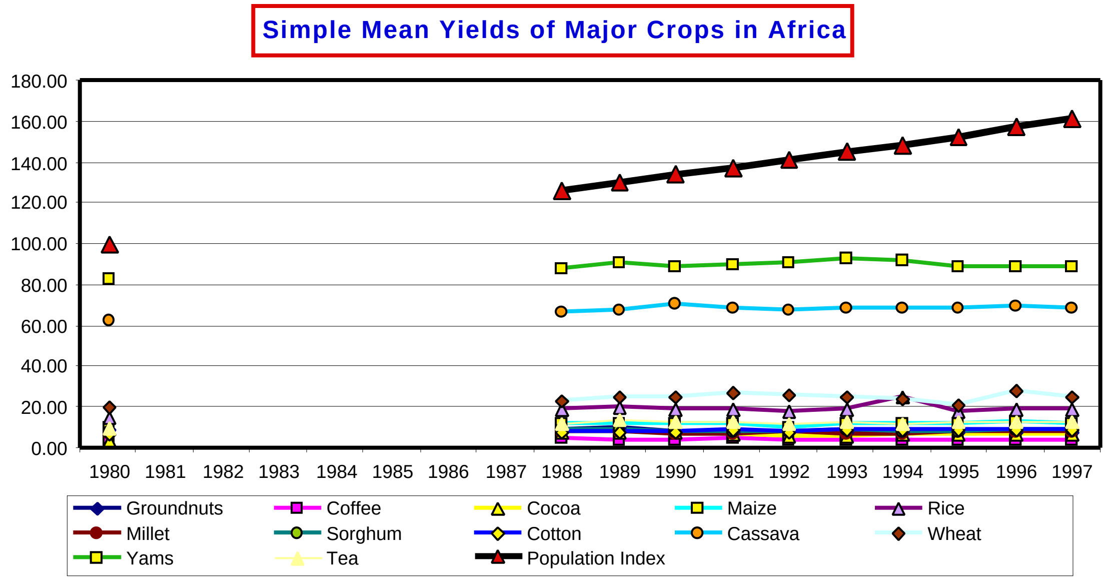
Source: UNCTAD, *Africa's Commodity Problems, Toward a Solution*, 1992

Figure 1



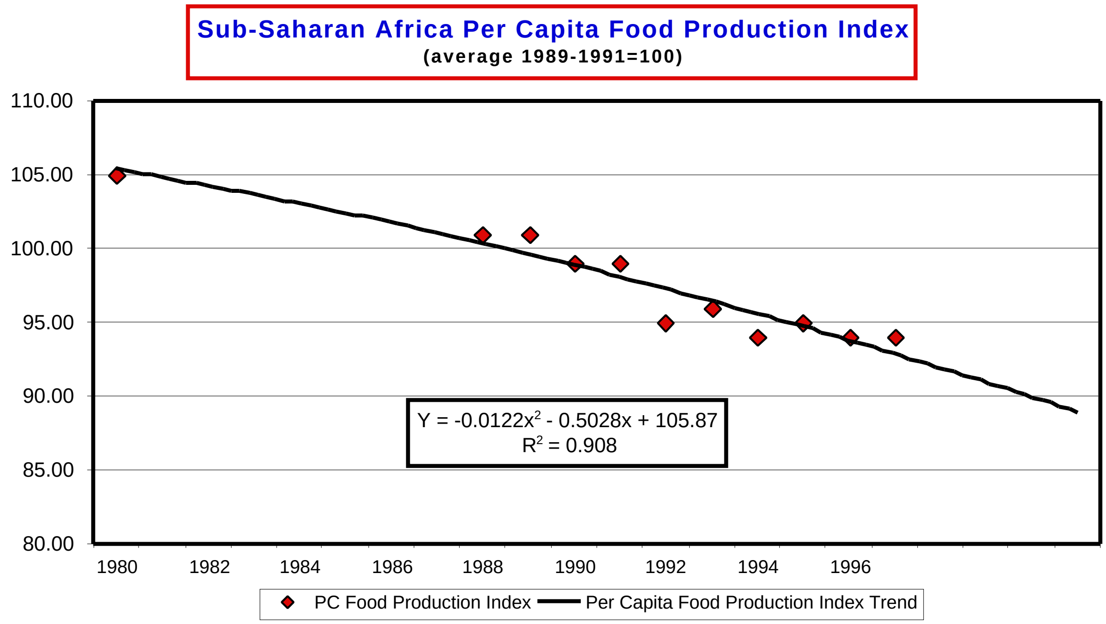
Source: UNCTAD,*Africa's Commodity Problems: Towards A Solution* (New York: UN, 1992), p. 123

Figure 2



Source: The World Bank, *African Development Indicators, 1998/99* (Washington, D.C.: The World Bank, 1998)

Figure 3



Source: The World Bank, *African Development Indicators, 1998/99* (Washington, D.C.: The World Bank, 1998)