WORLD BANK

Poverty and Agriculture

By Grace Lee

Introduction

Deep in Upper Egypt, along the western bank of the Nile River, lies the city of Sohag, where 3.2 million people have been living in a **stagnant** state of poverty for decades. In the year 2000, 77% of Sohag residents lived in rural areas with density rates of 1,900 people per square kilometer, some of the highest rural population densities in the world. Illiteracy rates were approximately 70%, and 90% of its villages lacked sanitation. Highly centralized decision-making procedures, delayed **bureaucratic** mechanisms, and slow disbursement of policies and resources have crippled this society, preventing it from joining in the globalization boom that has transformed the lives of billions of people in the last several decades.

Stagnant—*not advancing or developing.*

Bureaucratic—*having the hierarchical, burdensome characteristics of a bureaucracy.*

However, in 2000, the city of Sohag finally began to see change. This is because of the Sohag Rural Development Project, a project funded by the World Bank that aimed to support **sustainable** economic development in Sohag by improving the quality of life of its rural communities. The World Bank contributed a total of $50 million to achieve this goal, and the Government of Egypt contributed another $23 million. In the following years, roughly 56 schools, 27 post offices, 6 health centers, 15 social centers, and 470 kilometers of road were constructed, in addition to the implementation of various projects targeting water, sanitation, and irrigation. Nearly two million people in 650 villages experienced significant economic, social, environmental, and health benefits stemming from this remarkable renovation of the public infrastructure.

Sustainable—*capable of being upheld over a long period of time.*

This example is only one of many international cases in which developing countries have played a pivotal role in the evolving global system. As the world faces the opportunities and strains of globalization, global institutions like the World Bank aim to foster inclusive and sustainable globalization, with the ultimate goal of overcoming poverty. With the release of its *2008 World Development Report*, the World Bank set agriculture and small farmer productivity at the heart of its global agenda. As three-quarters of the world's poor live in rural areas and depend on agriculture for their **livelihood**, growth derived from agriculture is likely to be extremely effective in improving the lives of this segment of the world's population. However, in this environmentally sensitive global climate, concerns regarding freshwater resource usage and **greenhouse gases** complicate the question of how best to implement agricultural policies. Although increased agricultural productivity could potentially be rather effective in **alleviating** global poverty, pro-

Livelihood—*means of support or existence.*

Greenhouse gases—*gaseous elements of the atmosphere that are essential to maintaining the Earth's temperature; an increase in greenhouse gases is thought to lead to global warming.*

Alleviate—*to relieve or lessen; to make more bearable.*

ceeding with an environmentally irresponsible agriculture program could create a whole host of future problems. Although an easy resolution does not appear to exist, the immediacy and importance of the problem of global poverty demands that serious attention be given to this issue.

Explanation of the Problem

The dilemma of poverty has plagued society since the beginnings of civilization, with its **onerous** burden disproportionately placed upon rural communities. Nearly one billion people who fall below the $1 per day poverty line live in rural areas and depend on agriculture for their livelihoods. Growth outside of agriculture has failed to involve this segment of the population, as recently demonstrated in both China and India, where the standard of living in urban areas has been quickly rising above that of rural areas. Indeed, massive poverty has continued in the face of widening **disparities** between rural and urban areas in terms of quality of life. The World Bank first introduced the topic of agriculture and its effect on development in the 1982 *World Development Report*.

The **Green Revolution** of the 1970s and 1980s in Asia and Latin America proved that agriculture was a powerful development tool, as the innovation of high-yielding varieties of rice and wheat led to expanded cereal production and the reduction of famine. However, when this system failed to achieve similar success in rural areas of Africa, **disillusionment** led to a decrease in global development assistance to agricultural efforts – from 17% of total assistance in the early 1980s to 3.5% in 2004. Robert McNamara, the World Bank president in the 1970s, initiated an ambitious period of investment in African agriculture that ultimately failed for two critical reasons: the complexity of the projects, formulated and run by professionals from outside the target countries, and a lack of enthusiasm on the part of the poor countries that had little capacity to successfully execute the projects.

Millennium Development Goals

In 2001, the United Nations adopted the eight **Millennium Development Goals**, including reducing child mortality rates, fighting epidemic disease, and developing a global partnership for development by the year 2015. The goal of reducing the proportion of people living in extreme poverty and suffering from hunger by one-half by the year 2015 became the explicit mission of the World Bank. In 2008, the World Bank reached the conclusion that there was no **feasible** solution for problem regions like Africa other than using agriculture as a source of growth. Many other alternatives to agriculture have proven to be failures: private markets, influenced by corrupt governments and **subsidy**-driven policies, have simply failed to deliver the goods and services

Onerous—*involving or imposing a burden.*

Disparity—*distinctly different in composition or makeup; in this context, inequities.*

Green Revolution—*a technological revolution that allowed agriculture to produce much more effectively and efficiently beginning in the 1970s.*

Disillusionment—*to lose naïve faith and trust.*

Millennium Development Goals—*eight international development goals that UN member states have agreed to achieve by 2015; they include reducing poverty, reducing child mortality rates, fighting epidemics, and enhancing*

Feasible—*capable of being done successfully.*

Subsidy—*a grant of money, often by a government to a person or company in order to assist them in markets.*

needed by farmers to achieve a sustainable level of productivity. The 2008 *World Development Report* warned that the Millennium Development Goal of halving poverty would only be met if much greater attention were paid to agriculture as an instrument for development. Agriculture had long been established as an important source of food security and wage competitiveness, especially in landlocked countries where transportation costs are high and importing food is too expensive. This report drew attention to the multiple functions of agriculture, from producing food to serving as a major engine of growth to improve the livelihoods of millions of people.

Impact of the 2008 World Development Report

The technology boom of the late twentieth century created new opportunities for using agriculture more effectively than in the past. Reduced taxation, new high-value crops, the increasing importance of the livestock economy, genetically modified crops, and **biofuels** all contributed to the expanded potential of agriculture for development. Case studies of **smallholder farms** and rural workers moving out of poverty with the support of good policies and institutions were cited as evidence of this potential. The report concluded that agriculture would be the way to usher Africa into a new era of prosperity through increased public investment in scientific research, rural roads, irrigation, credit, fertilizer, and seeds for the largely destitute continent.

Biofuel—*fuel composed of biological raw materials, like sugar or corn.*

Smallholder farms—*very small farms that are often too small to produce more food than is needed to simply subsist.*

The theme of the 2008 *World Development Report* had been preceded both by the commitment of African governments at the 2003 African Union Summit to more than double their extremely low public spending on agriculture, and by the 2005 United Nations Millennium Project led by Columbia University economist Jeffery Sachs, which proposed major investments geared towards increasing the productivity of poor African farmers. These two factors were important in increasing support for the goals set forth in the 2008 *World Development Report*, but it is the World Bank's support that really made a difference. Because of its unique position in the international scene, the World Bank made the 2008 *World Development Report* a hallmark in the history of global development policy, and its support of an increased focus on agriculture in the fight to reduce poverty resulted in a major boost in these efforts.

Environmental Concerns

Despite the good intentions of the goals set forth in the 2008 *World Development Report*, others argue that an increased focus on expanding the agricultural industry could have severely negative impacts on the environment. There has been a marked intensification of the international debate on environmental issues in recent years, partly catalyzed by the 2008 United States presidential race. These environmental

concerns include – but are not limited to – global warming, the use of renewable energy, conservation, recycling, and pollution. Given the rise in greenhouse gases and potential effects of climate change, the potential environmental costs of agricultural development are a major consideration for policymakers. The agricultural industry uses approximately 80% of the world's freshwater resources and produces 21% of global greenhouse gases. The environmental cost of agricultural growth has historically been high, and any positive effects on poverty resulting from the use of an agriculture-based program could potentially be **offset** by negative environmental impacts.

Offset—*to counterbalance.*

Recent Developments

Investment and Growth Programs

In 2006, the **Bill and Melinda Gates Foundation** partnered with the **Rockefeller Foundation** to establish the Alliance for a Green Revolution in Africa. The Alliance aimed to implement better environmental management practices in Africa while providing considerable resources for developing agriculture at the smallholder farmer level. This exemplifies the recent trend towards environmentally-conscious growth programs that incorporate sustainable practices into agricultural expansion plans. This trend has resulted in greater investment in technological research, sustainable land management, transportation infrastructure, irrigation, rural **microcredit**, and strengthening market opportunities. Nevertheless, the problem remains of how to most effectively create an agriculturally-based economic structure in poverty-stricken rural areas without contributing further to the future environmental debt.

The Bill and Melinda Gates Foundation—*a private organization that aims to globally improve healthcare and reduce poverty.*

Rockefeller Foundation—*a prominent philanthropic organization that seeks to promote the well-being of people across the world.*

Microcredit—*the extension of small loans to the unemployed or those living in poverty who aren't considered bankable.*

Rising Food and Oil Prices

Additionally, the price of food and oil soared to an all-time high in early 2008, causing an outbreak of riots and widespread panic in developing nations. This rise in prices was inevitable, as China and India shifted from primarily food-producing to primarily food-consuming due to their respective economic booms. Additionally, these high oil prices have made transportation of people and goods more costly, thus leading to a further increase in food prices. Despite the recent decline in oil prices, the forecast looks grim, and some estimate that it could take as long as a decade for food prices to decrease to their original levels. Meanwhile, governments have scrambled to **quell** violent protests from Mexico to Pakistan, as the possibility of food shortages has become increasingly real.

Quell—*to quiet or calm down.*

Focus of the Debate

Agriculture can be a major driver of rural development for a variety of reasons. In countries with relatively abundant natural resources, agricultural development can help those nations gain a competitive edge because of the ease of producing crops. Encouraging agriculture also gives way to investment opportunities, and helps develop agriculture-related industries like **agrichemicals** and machinery. Yet major barriers to agricultural development exist. Rapid population growth, declining farm size, poor farming practices, falling soil fertility, and missed opportunities for income diversification all create distress. Overcoming these problems requires dedication specific policy measures.

Agrichemicals—*the fertilizers, pesticides, and other chemical products created for use in agriculture.*

Fiscal Policy

In 1980, Asian countries trying to become industrialized devoted at least 10% of agricultural GDP to research and advancement. Many parts of Sub-Saharan Africa today spend only four percent of agricultural GDP on agricultural growth. Instead, they opt for short-run responses to deliver cheap food rather than long-term investments in growth. As a result, according to the World Bank's 2008 report on rural development, two types of fiscal policies have hurt rural agriculture in developing nations: under-investment in agricultural development and over-taxation of agricultural products.

Misallocation of resources away from agriculture is not confined to countries with agriculture-based economies. In countries with rapid growth in nonagricultural sectors, labor resources are allocated away from agriculture. This often leaves large numbers of poor people in rural areas with few job opportunities because they don't get the capital to buy modern farming equipment, exacerbating the rural-urban income gap. Even when the farm population demands subsidies and protection, economic policy unfairly biases urban areas. For example, in India, urban demand for low food prices causes the government to artificially limit food prices. The cost of such a subsidy is three times the amount that India invests in agriculture. This effectively becomes a transfer of wealth from rural regions to urban areas. This is not to say that all subsidies are harmful; subsidies can be used to overcome market failures and prop up domestic industries. However, long-term investments that would likely give high returns—as described below—are sacrificed as governments devote money subsidies and simple agricultural inputs like fertilizer and seeds. In Zambia, for example, 37% of the government's agricultural budget was spent on fertilizer subsidies in 2003-2004. Only 15% was dedicated to research, rural infrastructure, and developmental services—all areas which could have high long-term payoffs.

Research and Development

Investing in long-term agricultural growth is critical to improving life in rural areas. While investment in agricultural research and development (R&D) in China and India has tripled over the last 20 years, it has increased by barely a fifth in sub-Saharan Africa. In roughly half of the countries there, R&D investment has even declined. African countries are uniquely disadvantaged by the fact that their environment is less able to benefit from international technological advancements designed in North America, Europe, and Asia as they cannot be applied readily to the sub-Saharan climate. Thus, increasing investment is essential to long-term agricultural success, and regional cooperation in R&D could help defray high costs.

Infrastructure Development

Access to water and irrigation is a major determinant of agricultural productivity and stability. In Sub-Saharan Africa, only 4% of **arable** land is under irrigation, compared to 39% in South Asia and 29% in East Asia. Given the problems posed by increasing water scarcity due to high demands, the most efficient way of solving irrigation problems may be to revamp existing schemes. Mali invested in the maintenance of irrigation facilities and reform of irrigation management staff, and saw a near tripling of total rice production in subsequent years.

Arable—*suitable for farming.*

Rural markets and roads must also be developed. Inadequate transportation infrastructure and services hurt farmers' ability to transport and sell their products. Trader surveys in Benin, Madagascar, and Malawi find that the transportation costs of getting goods to market account for 50-60% of their total marketing costs. Improved roads, ports, and airports must be made to link farmers and the rural economy to local, regional, and international markets.

Beyond building roads, markets can be improved by improving commodity exchanges, market information systems, using radio and short messaging systems, warehouse receipts, and other risk-management tools. Disease surveillance and regulated food processing facilities must also be improved.

Educational Investments

Educational investments are critical for rural residents to accelerate the development process. Rural education levels remain low worldwide, with average rural adult males in Sub-Saharan Africa, north Africa, and South Asia receiving four years of education and females receiving three.

Incentivizing rural education is key, as young adults must be given specific reasons for staying in school rather than going to work with the family in the field. If demand for education is lagging among rural households, simple cash transfers have been shown to be effective

in improving school attendance in Bangladesh, Brazil, and Mexico. However, the quality of rural education also requires reform, as education must be conceived more broadly to include vocational training in technical and business skills that can be widely applicable.

NGO Perspectives

Greenpeace

Greenpeace is an international non-governmental organization concerned with the protection and conservation of the environment and promotion of peace. It aims in particular to campaign for sustainable agriculture by encouraging socially and ecologically responsible farming practices. In this debate, it would strongly advocate that the environmental impacts of agricultural investments be understood and remedied. In early 2008, Greenpeace published a document entitled "Cool Farming: Climate Impacts of Agriculture and Mitigation Potential" that focuses on the significant contributions of agriculture to greenhouse gas emissions. The document questions the sustainability of modern industrial agriculture, instead providing suggestions for improvements in crop and grazing land management and in the restoration of **organic soils** as **carbon sinks** to reduce greenhouse gas emissions from agriculture.

Organic soil–*natural, loose soil that can be used as a fuel resource.*

Carbon sinks—*a collection of indefinitely stored carbon; can be used to mitigate the effects of large greenhouse gas emissions.*

Oxfam International

Oxfam International is a **conglomerate** of 13 international organizations with over 3,000 partner institutions dedicated to eliminating poverty and injustice. Oxfam's main program has three main points of focus: development work using long-term solutions to lift communities out of poverty; humanitarian work targeting people immediately affected by conflict and natural disasters; and exerting its influence to affect policy decisions that could help preventconflict. It supports the provision of comprehensive assistance, including financial aid, to developing nations for use towards alleviating poverty. Africa has long been at the top of Oxfam's list of priorities in this respect, receiving billions of dollars in aid from the organization over the past decade. As such, Oxfam would likely support initiatives aimed at alleviating global poverty.

Conglomerate—*a group of separate entities that are under the same management*

The Red Cross

The Red Cross is a private humanitarian institution with unique jurisdiction over victims of international and domestic armed conflicts. It has directed numerous international relief projects in the past, in addition to promoting humanitarian law and universal humanitarian principles. Though its mission as outlined by the Geneva Conventions does not directly mention development assistance, the Red Cross directs a great deal of resources towards combating poverty, as conflict often leaves people **estranged** and **impoverished**. In this respect, the Red

Estranged—*to be removed from one's customary environment.*

Impoverished—*to be deprived of wealth.*

Cross functions in a predominantly crisis-oriented capacity; although it rarely initiates long-term projects geared towards general quality of life, it often provides **logistical** support for such projects.

Logistical—*having to do with the details of an operation or situation.*

Possible Solutions

Any solution to the problem of poverty will require a comprehensive assessment of the contributing factors, which can range from lack of infrastructure to poor policy to disease.

Agricultural Development

Certainly one of the most promising solutions to emerge has been the concept of using agricultural development to propel poor countries towards prosperity. Tracing the problems of these countries to their source suggests that an agriculture-based program may be a successful approach in the long run. A solution structured around sustainable agricultural development would have to balance the effects of rapid expansion with environmental concerns. Technology has the potential to provide the means to achieving such a compromise. Another component might focus on management practices, such as integrated nutrient management, **agroforestry**, or **water harvesting**.

Agroforestry—*a combination of agriculture and forestry to develop a more productive and sustainable use of land; involves both trees/ shrubs and crops/ livestock.*

Water harvesting—*the gathering and storing of rainwater.*

Free Trade System

Another feasible solution to this issue could revolve around developing international policies on agriculture to facilitate a free trade system. In this case, nations could be petitioned to eliminate agricultural subsidies, which many argue hurt development. This approach would utilize a free trade system as a means to achieve the end of reinvigorated agricultural growth. Proponents of this view argue that rich countries like the United States that subsidize their farmers to create products disadvantage poor countries, because poor countries cannot afford to do the same for their farmers. As a result, the market for products from these poor countries is seriously limited, leaving farmers with no one to whom they can sell their goods. Essentially, a subsidy creates a distortion in the market by artificially lowering the price of a product.

For example, let's say that the US government gives farmers $10 for every bushel of corn they produce. This gives US farmers an advantage in the market because now they can sell their product for $10 less than they could before, meaning that even if it costs American farmers more to produce corn than their African or Latin American counterparts, they can often sell their products for less. This makes it extremely difficult for farmers in the developing world to compete on global markets, and often developing countries end up importing vast quantities of subsidized food that they could grow themselves, but is cheaper to import because of the subsidies.

The elimination of subsidies in the developed world would allow farmers in the developing world to compete in global markets and for developing nations to become self-sufficient with regards to food. When developing nations can't maintain their own food supply because imported food is so cheap, they become incredibly vulnerable to food price shocks like we've seen in recent months.

Questions for Policymakers

The issue of using agriculture for development to reduce poverty in poor rural areas is complex, and it involves the consideration of a wide variety of concerns. A thorough resolution will require a comprehensive program and will address questions such as: At what level should an agriculture development program be organized – international, national, or local? What can developed nations do to assist developing nations? How should agreements be negotiated among nations, between nations and farmers, and among farmers? How do environmental considerations weigh against the immediacy of the problem of poverty? At what point does the **dire** situation of the present outweigh the potential negative side effects that could impact the future?

Dire—*dismal; urgent; extreme.*

Conclusion

The World Bank states that its ultimate goal is to reduce global poverty, specifically by meeting the Millennium Development Goal of cutting global poverty in half by the year 2015. It proposes to achieve this by focusing on helping developing countries and their people and by working with World Bank partners on a financial and logistical level. In order to foster economic growth and empower poor nations to invest in their development, the World Bank concentrates on building an atmosphere suitable for investment, jobs, and sustainable growth. This goal is achievable, and this method is sound, but the actual act of combating the many different arms of poverty is very difficult. Agriculture is merely one of these arms, and to create a successful development program, substantial work on the part of farmers, governments, and international organizations alike will be necessary. The World Bank is in the unique position to provide the intellectual and financial fuel to power the engine of social change, and as members of the World Bank, you ultimately have the ability to determine the direction of the solution.

Guide to Further Research

A good starting place for further research would be the World Bank website, which offers a great deal of information on global devel-

opment and the organization's many different approaches to combating global poverty. It would also be valuable to take a look at both the 1982 and 2008 *World Development Reports*, both of which focus on agricultural development. The authors of both reports, including Alain de Janvry, Jacques Diouf, Leonard Boge, and Basil Cracknell, have all thoroughly researched this topic and are considered some of today's leading authorities on the subject. Additional works published by these individuals can also be accessed through the World Bank website. Moreover, the United Nations, Oxfam, and Greenpeace websites contain substantial information on topics related to the World Bank's work, including critiques and other considerations to bear in mind when debating agricultural development.

Newspapers have also covered the issue of agricultural growth and poverty extensively, so it would be worthwhile to take a look at archives of the New York Times, BBC, and other international news publications.

To gain a more general idea of international perceptions of the World Bank and its policies, the book *The World Bank and Governance: A Decade of Reform and Reaction*, edited by Diane Stone and Christopher Wright, is a good source. For a more specific scope, Steven Haggblade, Peter Hazell, and Thomas Reardon edited a book called *Transforming the Rural Nonfarm Economy: Opportunities and Threats in the Developing World* that would be worth browsing or reading.

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