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REFORMING THE COTTON TRADE ORDER? AN ANALYSIS OF COTTON SUBSIDIES AND IMPLICATIONS FOR SUSTAINABLE DEVELOPMENT

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Cotton is the most widely produced cash crop in the developing world. It supports the livelihoods of numerous households in these countries and occupies a significant position both economically and politically. However, in the recent past, this sector has experienced a pricing crisis mainly attributed to subsidies of developed nations. This article analyzes the effects of cotton subsidies (the most controversial agricultural commodity in the ongoing trade negotiations) on sustainable development, focusing on the impacts of U.S. subsidies on four West African countries. Given that these support systems have political motivations, the article briefly surveys political challenges to subsidy reforms. In conclusion, the article makes specific recommendations to the WTO and national governments to promote free trade, enhance economic efficiency, and support the global fight against poverty.

INTRODUCTION

Cotton is the most widely produced crop in the developing world. As such, close to one billion people derive their means of livelihood from its production and marketing (International Cotton Advisory Committee 2002, 2). Among these are small-scale farmers in Brazil and the arid regions of West Africa (Burkina Faso, Chad, Benin, and Mali). However, in the last few years, there has been a crisis in the industry due to declining world prices primarily caused by heavily contested agricultural subsidies. At the center of the controversy are subsidies awarded to cotton farmers by the United States and the European Union (EU).

The significance of the damage to the industry is exemplified by Brazil's filing of a complaint to the Dispute Settlement Body (DSB) of the World Trade Organization (WTO) against the United States. Australia and some West African countries supported this action. It alleged that U.S. cotton subsidies were in violation of WTO agreements. Brazil further complained that the statutory instruments providing the subsidies were inconsistent with WTO law and requested the DSB to investigate the matter (WTO 2003b and 2003c). In April 2004, the DSB Panel report concluded that U.S. actions inconsistent with the WTO agreements nullified or impaired benefits accruing to Brazil (WTO 2004).

It recommended that the United States withdraw the inconsistent measures within six months of the adoption of the DSB report or by July 1, 2005, whichever is earlier. The United States filed its notification of appeal before the Appellate Body, which also ruled that the subsidies were inconsistent with WTO law (WTO 2005). In the meantime, the subsidies continue to nullify or impair benefits to Brazil and other WTO members, particularly Benin, Burkina Faso, Chad, and Mali. It is noteworthy that these latter countries presented the cotton initiative to the Cancun Ministerial Meeting,¹ calling for the elimination of subsidies and financial compensation (WTO 2003a and Goreux 2004b).

The complaints of Brazil and the West African countries are not unfounded. In the past few years, the world cotton market suffered from severe price declines. From January 2001 to May 2002, world cotton prices fell by almost 40 percent, from sixty-four to thirty-nine cents per pound.² This decline, although part of a longer downward trend, was exacerbated by three factors. First, waning worldwide economic growth led to a reduction of demand, setting it at a constant 20 million tons between 2001 and 2002 (Minot and Daniels 2002, 1), a contrast to the 1.8 percent world growth rate from 1960 to 2000 (Baffes 2004). In addition, China, the leading

importer, subsidized auctions of government stocks, and combined this with quantitative import restrictions, to meet growing internal demand with minimal imports (Goreux 2004).

Second, competition from synthetic fibers adversely impacted the cotton industry. Polyester is one such example. It sold at fifty-five cents per pound; 20 percent cheaper than cotton. The substitution effects were such that cotton's share of world fiber declined from 60 percent in the 1960s to 39 percent (ICAC, 2004). Finally, the United States had record production and near-record exports in 2001 (Goreux 2004 and ICAC 2002, 2). Ironically, U.S. exports expanded in the face of stagnant global demand drawing suspicion to its subsidies (U.S. Department of Agriculture 2002). The cumulative effects of these factors for the cotton sector were especially detrimental for developing countries. While economic growth rates and reduction of market demand are external factors, subsidies are not and fall under the domain of the WTO.

Reform of the WTO's agricultural subsidy policies in the context of the ongoing Doha negotiations is therefore needed. Article 2.3 of Agenda 21³ calls for substantial and progressive reduction in the support and protection of agriculture. To the extent that it covers *inter alia* export subsidies in the commodity sector, it attains specific relevance to this issue (United Nations Division of Sustainable Development 1992). This article examines the impact of subsidies on the industry and their implications for sustainable development in cotton-producing regions.

The first section establishes the fundamental dynamics of the cotton industry by identifying major producers and substantial providers of agricultural subsidies. This is followed by the identification and critical analysis of the effects of U.S. subsidies in light of the commitment of WTO members to reduce and eventually eliminate subsidies. A brief examination of the economic and environmental consequences of increased subsidies for developing countries, as well as a discussion of political considerations, follows. Finally, the article makes specific policy recommendations aimed at promoting equitable and sustainable trade in the cotton industry.

THE FUNDAMENTAL DYNAMICS OF THE COTTON INDUSTRY

The major producers of cotton are China, India, Pakistan, and the United States. In comparison, the EU as well as the West African and Central Asian states are smaller. Together, the United States and EU account for approximately 25 percent of world output and 35 percent of global exports (Oxfam 2002, 10-12 and Baffes 2004). Any significant change in

U.S. production, therefore, has serious implications for the volatile cotton prices; too much production will drive down prices, especially if there are changes in weather conditions and foreign trade policies. This, in turn, has serious implications for other countries.

The West African Cotton Industry

Technically, West Africa is a small, cotton-producing region. But cotton growing has developed rapidly under the Franc zone and it is now the fifth largest producer in the world and the second most important fiber exporter after the United States. The cotton sector is thus of crucial economic and political importance to these countries, accounting for 5 to 10 percent of Gross Domestic Product (GDP) in Benin, Burkina Faso, Chad, Mali, and Togo, surpassing income from fiber export (Goreux 2004, 9). Furthermore, fiber export accounts for more than one third of total export receipts and over 60 percent of the value of agricultural exports.

Cotton cultivation has also contributed to the expansion of food crops with an appropriate crop rotation pattern. Also, the fertilizers acquired through cotton credits facilitated an increase in corn production. In this belt, the population receives most of its cash income from selling seed cotton while the overall economic activity remains highly dependent on export earnings. For example, cotton is the single basic export product in Benin, whose underdeveloped economy is highly dependent on subsistence agriculture (Minot and Daniels 2002). In 1997, taxes in the sector represented almost a fifth of the state budget (WTO 1997). Similarly, Mali is the biggest cotton producer in sub-Saharan Africa with cotton providing 50 percent of its export earnings (Central Intelligence Agency 2004).

Another country in the zone is Chad. It is landlocked, partly a desert and geographically remote. It suffers from intermittent drought, lacks infrastructure, and experiences political turmoil caused by the perennial rivalry between the northern, semi-nomadic Muslims and the southern, animist, and Christian farmers (Central Intelligence Agency 2004). Up until a few years ago, cotton was its main export crop, but this has since changed with exploration of Chad's oil reserves. Through the cotton sector, people have access to credit, technical assistance, and insurance. Similarly, cotton is the main export product in Burkina Faso, one of the world's poorest countries.

In this region, cotton is grown within the Sudanian and Sudanian-Guinean zone⁴ on one to three acre farms, requiring intensive labor during planting and picking. For example, farmers in Chad prepare fields using hand-held ploughs drawn by oxen, plant seeds, pick cotton by hand, and

weed manually. Output is therefore very low –at 400 pounds per acre compared to 1,000 pounds in Brazil and China and 700 pounds in the United States (Oxfam 2002, 21). However, this technique lowers West Africa's production costs.

In the past, the cotton sector was managed by vertically-integrated, public monopolies, but declining world prices and liberalization encouraged by the World Bank and the International Monetary Fund (IMF), led to reforms in its management (Oxfam 2002 and Goreux 2004). For instance, while Burkina Faso's cotton company still holds a monopsony on cotton purchases, 30 percent of its shares were acquired by producers in 1999. In Benin, the strong leadership of farmers' and ginners' organizations influenced reforms. Today the private sector, led by these producer organizations, plays a principal role in financing and setting priorities for research in the sector. The privatization of the primary processing operations of the national cotton company is in its final phases. Mali is the only other country where noticeable efforts are being made to reform the sector, following the near-bankruptcy of the national cotton company a few years ago (Baffes 2004).

The U.S. Cotton Industry

The contrast between West African and U.S. farming systems is striking. Cotton does not have nearly the same level of primary importance in the United States as it does in West Africa. American farmers can easily shift from cotton to other crops such as soy; however, the scope for substitution is much more limited in the Sahel. Moreover, the size of the farms, technology, and support systems differ substantially.

The U.S. cotton belt extends from southern California in the West, through Texas and Arizona, to Mississippi, Alabama, and the Carolinas in the East. It covers approximately 14 million acres of farmland run by approximately 25,000 farmers, who are dwindling each year through consolidation and takeovers. Farm sizes range from an average of 2,000 acres in the more arid regions of the Texas plains to 500 acres in the Carolinas and Mississippi. The largest farm in the United States, and one of the largest in the world, is some 200,000 acres in central California.

These farmers, unlike their West African counterparts, rely on intensive capital systems. For instance, the vast cotton estates dominating the landscape of Lubbock, Texas operate on irrigated land drawing water from the giant Ogallala Aquifer with automatic water sprinklers that operate throughout the growing season. Aerial spraying administers insecticides, pesticides, and fertilizers while massive computerized harvesters pick cot-

ton, eighteen rows at a time (Oxfam 2002). The political lobby for cotton is therefore one of the strongest in U.S. agriculture. Led by the National Cotton Council of America, cotton barons foster an image of a sector operating in a harsh environment, but display an entrepreneurial drive that benefits the nation.⁵

In 2001, the fifth year of an unprecedented price slump, American farmers still managed to produce a record 20.3 million metric tons (42 percent higher than in 1998) and cotton surface area increased by 6 percent during the same period (U.S. Department of Agriculture 2002). At this time U.S. exports doubled, from 0.946 to 1.8 million metric tons. This performance was buoyed by subsidies and use of genetically modified cotton. Shortly thereafter, in May 2002, President Bush signed the Farm Bill into law to “promote farmer independence [and] preserve the farm way of life” (White House 2002). He asserted that U.S. farmers would not be treated like second-class citizens vis à vis the opening of trade. However, no country desires detrimental treatment of its agricultural industry, much less those where it maintains special importance.

The Cotton Industry and Development

The cotton industry has prominent political, social, and economic roles in all producing regions. For example, in China, India, and Pakistan 45, 10, and 7 million rural households, respectively, are engaged in cotton production (Baffes 2004). In Africa, the number of rural households depending on cotton totaled 6 million (Baffes 2004). This high dependence on cotton has important development ramifications.

In this regard, cotton is credited with enhancement of food production in West Africa. A study carried out by the World Health Organization (WHO) in Burkina Faso found that households growing cotton and maize had better nutrition and higher income than households growing a single cereal crop (Goreux 2004). Additionally, a study on Benin found that 40 percent reduction in farm gate cotton prices implied a 7 percent reduction in rural per capita income in the short run and a 5 to 6 percent reduction in the long-run. The study also showed that the incidence of poverty among cotton growers could rise in the short run from 37 to 59 percent (Minot and Daniels 2002, 9).

Moreover, a 175 percent increase in cotton production recorded between 1993 and 1998 in Burkina’s cotton districts was associated with a fall in poverty levels from 50 to 42 percent. Over the same period, poverty increased among farmers by two percentage points in areas in which no cotton was grown (Goreux 2004). The study concluded that the expansion

of cotton cultivation was a major factor in improving health indicators. Cotton production has a galvanizing effect on infrastructure development, improving roads, and providing access to facilities such as credit and agricultural extension services. All of these enhance societal welfare.

Despite these positive impacts, the prevalence of poverty in these countries coupled with severe shortage of economic alternatives renders farmers highly vulnerable to falling prices. Lower prices mean less expenditure on food, health, education, investment, and labor wages. Reduced income weakens the government's capacity to provide basic social services or meet international obligations such as balance of payments. Increasing subsidies exacerbate these problems. In sum, the cumulative implications of current subsidy policies for poverty reduction and sustainable development cannot be underestimated.

WTO members committed to reduce subsidies within the framework of the Agreement on Agriculture (AoA). Article 20 encourages use of less trade-distorting domestic support policies and provides for reductions in agricultural protection and trade-distorting support (WTO 1994b). The members agreed to continue with reforms at the end of 1999, but the 2001 Doha Declaration redefined this mandate by making the reform objectives more explicit and setting new deadlines. Yet these changes have not been easy to implement. The wide range of often-competing views and interests among members, as demonstrated at the Seattle and Cancun trade negotiations, is an obstacle to progress.

The long-term goal is to liberalize agricultural trade so that countries benefit on the basis of price competitiveness and quality rather than subsidies. This is extremely important for developing countries whose economies largely depend on exports of primary agricultural products. But as long as the power dynamics remain, liberalization will be elusive. Cotton is caught in this quagmire.

THE CASE AGAINST U.S. SUBSIDIES

The United States is the world's leading grantor of subsidies. Its current programs constitute part of the commodity programs that were first introduced in the early 1930s. While the specific provisions change with the introduction of U.S. farm bills approximately every four to five years, the chief objective has remained largely constant. It aims for the transfer of resources from taxpayers (and to a lesser extent from consumers) to commodity producers (Baffes 2004).

Article 6(4) of the AoA allows developed countries to subsidize up to 5 percent of the total value of a product (WTO 1994b), and members with

larger subsidies than these *de minimis* levels committed to reduce them by 20 percent by 2001. The United States undertook to reduce its subsidies from its 1986 to 1988 base period by this percentage, resulting in a yearly limit of \$19.1 billion for 2000-2001. This reduction would be defined by the Aggregate Measure of Support (AMS), which adds up support to each agricultural product. But subsidy programs are classified under Article 6(1) AoA as blue, green, and amber depending on their market distortion effects (WTO 1994b). Since green and blue subsidies have minor distortion effects, the AMS only applies to amber subsidies. The United States enlarged its scope of green subsidies as it reduced its AMS, and the process of accomplishing this was systematic and gradual.

The United States enacted a Farm Bill in 1996 and introduced direct payments to producers called “decoupled” payments, which were not intended to affect the farmer’s decision to grow or not to grow cotton (Goreux 2004). This policy did not violate WTO law. In 2000, the U.S. Congress made additional appropriations to prevent the price received by cotton producers from falling below the average production cost of seventy-three cents per pound, which increased its aggregate subsidies (Goreux 2004 and Hart and Babcock 2002). According to United States Department of Agriculture (USDA) data, support to U.S. cotton growers reached \$878 million in 1997 and by 2000, stood at \$3.5 billion (USDA 2002). This too was not in violation of WTO law.

The 2002 Farm Act that replaced the 1996 bill provides increased scope for raising subsidies. From 2001 to 2002, U.S. farmers reaped approximately \$3.9 billion in subsidies, increasing by \$400 million in the last year. As the United States met its 20 percent reduction target, its total amount of subsidies had concurrently increased (Goreux 2004, 17), pushing producer prices 91 percent higher than world prices (Oxfam 2002). This increase was achieved through the employment of various programs, some of which contravened the provisions of the AoA.

Specifically, channels of support to producers under the 2002 U.S. Farm Act include price-based payments, decoupled payments, insurance, and countercyclical payments. U.S. cotton users and exporters also receive some support (Westcott and Meyer 2003). First, this Act provides for direct payments based on the value of production and yields during a previous production period. These direct payments (formerly decoupled) were predetermined annual payments based on historical areas allocated to cotton production. The U.S. government insists that such support is decoupled from production and therefore eligible for the green box.

Second, counter-cyclical payments were introduced in 1998 to com-

compensate for the “loss” of income resulting from low commodity prices. They were made permanent under the 2002 Farm Act. This measure is designed to increase payments to farmers during periods of low world prices thus enhancing production at the very time it should be declining. Because the payments are based on the market price falling to a certain level, they fall into the amber box.⁶

Third, there are loan-deficiency payments and marketing-loan gains, which are triggered when world prices fall below fifty-two cents per pound. These price-based payments are designed to compensate cotton growers for the difference between the world and the target price when the latter exceeds the former. The further they fall, the higher the payments cotton farmers receive. Since these are linked to the volume of farm production, they fall into the amber box. Other payments to exporters and domestic-end users of cotton are made when domestic prices exceed world prices, so that U.S. exporters maintain their competitiveness. In addition, other publicly-funded programs include research and extension services as well as subsidized irrigation. These arrangements make the U.S. cotton program complex and expensive but highly beneficial to cotton farmers and users.

The enactment of the 2002 U.S. Farm Act drew significant criticisms that the Act was a breach of U.S. commitments to reduce subsidies. It employs reclassification of subsidies from amber to green using the *de minimis* clause to enhance the extent of the support. However, there are potential breaches in relation to cotton subsidization. With cotton production valued at \$4 billion and a 5 percent *de minimis* allowance, the United States has a \$200 million margin of maneuver from the product specific clause. Given that global agricultural production is valued at \$200 billion, the United States has a \$10 billion overall margin of maneuver (Goreux 2004). While this increase in quantities is of legitimate concern, there is no provision forbidding it, rendering any challenge on WTO-inconsistent grounds highly unconvincing. With *de minimis*, a country can meet its 20 percent reduction target without reducing cotton subsidies.

Moreover, the 2002 U.S. Farm Act recoupled direct payments that were decoupled by the 1996 U.S. Farm Bill. Further, it changed the reference period from 1986-1988 to 1998-2001. Thus, payments linked to production during the reference period of 1998-2001 raised entitlement to subsidies, in effect, recoupling subsidies to production. Therefore, these payments should no longer find refuge in the green box. Moreover, anti-cyclical measures provide product-price linkages, and thus should belong in the amber category (Goreux 2004). These issues inform the complaints in the case against U.S. subsidies.

WORLD REACTION TO U.S. SUBSIDIES

Most importantly, the high level of U.S. subsidies and its impact on world markets drew two policy reactions: the complaint filed by Brazil following the expiry of the Peace Clause, and the cotton initiative (ILEAP 2004 and Goreux 2004). The Clause was an agreement by WTO members not to challenge agricultural subsidies that did not grant support to a specific commodity in excess of that decided during the 1992 marketing year. The peace provisions expired in 2003, but provided valuable time for countries enhancing subsidies (Article 13 WTO 1994b). Critics fault loopholes designed to allow political flexibility in the WTO for worsening the situation.

One example relates to the classifications of subsidies previously discussed. Although there are rational grounds for establishing a distinction between green and amber categories, there are none for the *de minimis* clause (Goreux 2004, 16). Introduced as a safety valve by the United States and EU in the event it proved politically impossible to reduce subsidies, the *de minimis* clause enables these players to increase subsidies as long as they make compensatory reductions for less sensitive products. Indeed, had it not been for *de minimis*, U.S. amber subsidies would have increased by 44 percent in 1999-2000, which would have explicitly violated U.S. obligations (Goreux 2004, 17). This is also validated by the International Cotton Advisory Committee's (ICAC) estimation that subsidized cotton production increased from 50 percent in 1997-1998 to 73 percent in 2001-2002, primarily in the United States and EU (ICAC 2002).

Another criticism of WTO policy is leveled at AMS calculation, which covers all support provided on either a product-specific or non-product-specific basis but that does not qualify for exemption. This system obscures actual subsidized products and therefore does not afford recourse to countries with limited product choices, particularly West Africa and cotton. Lumping subsidies makes it difficult to establish which commodities gain more from above proportion subsidies. According to the International Lawyers and Economists Against Poverty (ILEAP), a vertical approach to calculating AMS (one product at a time) rather than the current horizontal approach (lumping) would be more transparent (ILEAP 2004).

Finally, subsidies promote overproduction, which drives down world prices. This generates unfair competition. It also leads to artificial expansion of the world market share of rich countries, which is inconsistent with the WTO consensus. Article XVI (3) of the General Agreement on Trade and Tariffs (GATT 1994) calls upon WTO members to avoid use of subsidies on the export of primary products. However, if such a subsidy

is applied, it should not result in the applying member having more than an equitable share of world export trade in that product. Yet, subsidies enabled the United States to expand its share of world production on a linear trend basis, from 16 percent at the start of the 1990s to over 20 percent at the end of the decade, at the expense of other cotton producers (Oxfam 2002).

To put the \$3.9 billion in subsidies received by U.S. farmers in 2002 in perspective, it was more than the entire GDP of Burkina Faso that same year. It was three times more than the entire United States Agency for International Development (USAID) budget for Africa, and it exceeded the 2001 market value of output by around 30 percent. In other words, cotton was produced at a net loss to the United States in 2001 (Oxfam 2002). The EU is the second largest subsidy provider. Its members Greece and Spain jointly received 16 percent of total subsidies paid in 2001 and 2002 (approximately \$1 billion) although they accounted for only 2.5 percent of world production. These subsidies allowed them to produce cotton that could have been imported at a third of this cost. This should not be permitted to continue.

THE IMPLICATIONS FOR SUSTAINABLE DEVELOPMENT

Direct Financial Costs

The financial cost from reduced prices has been prohibitive for West African countries. Using data from an ICAC model, Oxfam captured the foreign exchange costs associated with lower prices to exporters in Sub-Saharan Africa in 2001 at \$302 million. Eight West African countries accounted for two-thirds of these overall losses. Specifically, Burkina Faso lost 1 percent of GDP and 12 percent of export earnings; Mali lost 1.7 percent of its GDP and 8 percent export earnings; and Benin lost 1.4 of percent GDP and 9 percent export earnings (Oxfam 2002). Although Burkina Faso had increased exports by almost 50 percent since 1994, it received \$60 million less from export earnings than in the mid 1990s. Minot and Daniels' study on Benin also concludes that in absolute terms about 334,000 people would fall below the poverty line with a 40 percent price decline. These losses constricted economic growth, effectively countering success of poverty reduction efforts in these countries.

Additionally, such losses exacerbated existing balance of payments problems and domestic budget pressures pushing these countries to the brink of renewed debt crises. Distinctively, the losses undermined the highly indebted countries initiative costing Benin, Chad, and Burkina Faso more than they received in debt relief. For instance, Mali received \$37 million

in aid in 2001, but lost \$43 million as a result of lower export earnings (World Bank 2002). To protect the sector from economic collapse, the governments of Benin and Mali spent in excess of \$20 million and \$13 million, respectively, on price floors. These emergency expenditures generated major losses in price stabilization funds, which in turn exacerbated budget deficits and generated tensions between these governments and the IMF. Paradoxically, the IMF prohibited Benin from increasing cotton subsidies on the grounds that it would breach targets for reducing its fiscal deficit (Oxfam 2002). These transfers diverted funds from other basic social needs such as education, delivery of health services, and development of rural infrastructure resulting in loss of societal welfare.

Financial costs also impact the United States. Ironically, this policy imposes an unfair cost on U.S. taxpayers and has unfavorable social consequences. Big U.S. cotton farms are absorbing smaller ones, and a comparison of the 1987 and 1997 agricultural censuses shows that the number of farms fell from 43,000 to 31,500, while the average size of the remaining farms increased by 200 acres (USDA 2002b). Farms of 500 acres or more accounted for only 12 percent of all cotton farms and less than half of national output in 1987, but by 1997, this category accounted for 29 percent of all cotton farms and 71 percent of the production (Goreux 2004). Implicit in these mergers are job losses and reduction of competition. Cotton lobbyists have institutions in place for defending their interests. The mobilization costs are low and access to political power is easy. This contrasts the 100 million taxpayers who dilute the cost of the policy but cannot afford to lobby against it.

Environmental Costs

Cotton farming has intense environmental consequences. Therefore, subsidies that increase production exacerbate environmental degradation arising from cotton growing. Highly mechanized farming systems are employed in developed countries, which involve excessive use of toxic pesticides and insecticides (Oxfam 2002). According to the Food and Agriculture Organization (FAO) and the USDA, more insecticides are used on cotton than on any other crop. The agricultural pesticide industry is worth \$40 billion annually, of which 25 percent goes on cotton crop. In the United States, cotton uses 60 percent of all applied insecticides, approximately 60 million pounds a year, despite their being some of the most toxic and persistent chemicals polluting the environment (Sustainable Cotton Project 2004).

The Sustainable Cotton Project (SCP) estimates that of the top 15 chemicals used in California cotton farming, seven cause cancer, and all

but one cause birth defects. Organophosphate pesticides are still widely used in cotton farming, even though the USDA banned their use on food crops as a result of their link to cancer and to reproductive and neurological disorders (Kroll 2003). Moreover, the large-scale use of cotton by-products by dairy cattle indirectly endangers human health. As cotton pesticides accumulate in the soil and in biota, the residues often reach surface and ground water through leaching, rendering soil use and underground water unhealthy for human consumption. Pesticides used in cotton farming also affect wildlife, domestic animals, and biodiversity leading to high mortality rates of birds and aquatic organisms (SCP 2004). Finally, subsidies that enhance production promote pesticide treadmill—a situation where higher doses of pesticides are required to control pest populations.

Cotton is also the most freshwater-intensive crop in the world; it takes 29,000 liters of fresh water to produce one kilogram of cotton lint. This degree of consumption is a direct threat to freshwater conservation efforts (Kroll 2003). Expansion of cotton production simply requires more fresh water yet subsidies encourage farmers to expand output. The flood irrigation method used in cotton farming wastes huge areas of farmland by increasing salinity. In sum, excessive cotton farming promotes water scarcity, soil erosion, water logging, and salinity—all of which are environmentally costly.

By contrast, West Africa's smallholder production system minimizes these negative externalities and yet consistently produces high quality cotton at a cheaper cost. In 2001, a survey of the costs of producing raw cotton ranked the average production costs in Burkina Faso at twenty-one cents per pound compared to the U.S. average cost of seventy-three cents per pound. A third of U.S. farmers incurred costs above this level (ICAC 2001). Cotton production in West Africa also results in development of soil nutrient replenishment systems and pest control mechanisms well suited to local conditions. These latter countries have a clear comparative advantage in cotton production.

The ICAC projects that cotton prices will remain depressed for the foreseeable future. Although a modest recovery is possible, prices are likely to remain at fifty to sixty cents per pound until 2015, and perhaps decline further with increased subsidization. In the meantime, as developed country farmers produce cotton with extensive support, some West African farmers, unable to compete, may cease production altogether. This causes great unease in view of the severe limitation of substitutes in the Sahel regions.

Political Concerns

It is unrealistic to expect the United States to eliminate subsidies given the role of agriculture in political dynamics at both state and federal levels. The Congressional Committee on Agriculture is charged with maintaining a healthy national agriculture, and subsidies are integral to this mission. The Committee was behind the 2002 U.S. Farm Act and would resist efforts to reduce, much less eliminate, subsidies. Moreover, the agricultural lobby is very influential in the electoral process and would apply political pressure on the Committee to maintain subsidies.

In relative terms, the scale of cotton transfers dwarfs those of other crops. In 2001-2002, every acre of cotton farmland was worth around \$230 in subsidies compared with wheat at \$40-\$50 (Oxfam 2000). For large farms this translates to a huge financial windfall. Additionally, cotton production interacts with other industries. Hence, as much as two-thirds of cotton crop can creep into the food chain. Likewise, the pesticides industry in the United States gains from cotton production. Any statutory measure that reduces its output threatens to cut into these industries' profits and they also have political lobbies to protect their interests. These are but cursory challenges inherent in the subsidies debate.

Yet it is also the case that Seattle and Cancun trade negotiations collapsed because of agriculture. In Cancun, the United States' position on agriculture exacerbated tensions and called into question its commitment to conclude Doha negotiations. All WTO members wish to protect their agricultural sectors and any progress on negotiations requires significant concessions. Beyond the moral imperative, it behooves the United States, the superpower, to lead by example.

THE POLICY ISSUES

Despite these political difficulties and trade-offs, the impact of subsidies on development and poverty reduction calls for changes in WTO policy. In principle, the WTO forbids the use of subsidies, but its members negotiated for agriculture to receive special exemption starting with gradual reduction of trade distorting subsidies. As exemplified by the cotton industry, this exemption counteracts the objective of achieving free trade and leads to severe inequalities. This analysis demonstrates the need for the WTO to take action on three fronts: promotion of free trade, enhancement of economic efficiency, and the global fight against poverty.

Recommendations for the WTO

Develop Binding Timetables for Elimination of Subsidies

The Brazil-U.S. dispute offers an opportunity for the WTO to reassess progress made on reduction of agricultural subsidies and to develop a binding timetable on elimination of all forms of export support programs. The evidence suggests that progress is slow and proves beyond doubt that subsidies are on the increase (Goreux 2004, 23). Governments must observe commitments to reduce subsidies, pending the conclusion of negotiations for agricultural reform. For instance, the binding timetable could require members to suspend concessions against a non-complying member instead of the current system that limits suspension to complaining parties.

A number of economic analyses estimating the effects of elimination of subsidies reached similar conclusions. The ICAC concluded that in the absence of direct subsidies, average cotton prices during the 2000-2001 season would have been 30 percent higher. It projected that withdrawal of U.S. cotton subsidies would raise prices by eleven cents per pound, or 26 percent (ICAC 2000). Similarly, Goreux replaced the base year in the ICAC model with 1998-2002 average subsidies and estimated that in the absence of support, the world price of cotton would have been between 3 and 13 percent higher in these five years, depending on the value of demand and supply elasticities (Goreux 2004).

These conclusions strongly suggest that withdrawal of all subsidies would improve the overall price of cotton and benefit countries with comparative advantage. While this change may lower production (and hence increase consumer prices), the impact would be partially offset by the shift of production to non-subsidizing countries in the medium to long-term. Most importantly, the elimination of subsidies would improve real incomes for cotton farmers. In West Africa, it may boost economic growth, a positive path toward poverty reduction. Insofar as the fight against poverty is a basic objective for the region, increasing productivity and self-sufficiency is fundamental to this end. Measures that deny developing countries opportunities participate in trade are inconsistent with the goals of free trade and development aid policy.

Create Level Playing Fields in Primary Sectors

There is a need for a level playing field in primary sectors like cotton. Currently, farmers in developing countries do not receive the same level of financial and technical support, as do their competitors in developed countries. It is impossible for these countries to compete on equal footing. In the short term, this may require formulation of WTO-sanctioned

national regulations to restructure domestic support (especially in wealthy countries) away from capital-intensive agriculture toward enhancing the welfare of small-scale farmers. This would enable the farmers in developing countries to compete on a more equitable basis. Other gains stemming from these changes would include mitigation of environmental costs, reduction of tax burdens, and enhancing small farmers' competitive ability (Oxfam 2002).

Reassess the Product Process Doctrine

Currently, WTO importing members can enact different regulations to apply to a product on the basis of its physical characteristics. However, this is not the case for a product's production methods (the product process doctrine). A reassessment of this doctrine to enable countries to regulate on the basis of production processes would be welcome. For example, this would enable the reclassification of a commodity such as cotton as "like" or "unlike." Hence, cotton produced from genetically modified seeds could be classified as "unlike" organically produced cotton, thereby creating competitive but different markets for each category.

Reform WTO Trade Remedies

With respect to the cotton dispute, in the event that the Appellate Body finds that the United States is not in compliance, the remedies available to the complaining members may not offer them much relief.⁷ The Dispute Settlement Understanding explicitly envisages remedies in the event of continued non-compliance at the end of a dispute proceeding, but experience shows that this system is deficient. In practice, non-complying countries rarely offer compensation, and trade retaliation is the only remedy available to those that prevail in WTO litigation. However, trade retaliation has serious shortcomings.

First, retaliation amounts to trade contraction, which goes against the objectives of the WTO. Second, it often takes place in a sector different from that affected by the inconsistent measure and does not offer any relief to injured exporters. Additionally, all remedies are forward-looking and the prescriptions also depend on political and economic might. There is an urgent need to increase the scope of trade remedies or creatively apply the compensation provisions. Such a shift would require violators to provide financial compensation for incurred losses. Monetary awards would restore the status quo ante and improve the ability of poorer countries to meet national obligations (WTO 2003 and Goreux 2004).

Improve Developing Country Voices in WTO Decision-Making

Although the WTO is democratic in a formal sense, developed countries

construct WTO rules that are in their favor as exemplified by the de minimis clause. This democratic deficit manifests itself in two respects: power relations, and capacity and representation. While developed countries can ably defend their trade interests, most developing countries cannot. A state's ability to influence WTO decision-making goes hand in hand with its economic strength. Given the unequal power relations between developed and developing nations, the latter simply do not have the wherewithal to influence WTO policy-making.

It is crucial for poorer countries to obtain a stronger and effective voice in the WTO. One way would be to increase technical assistance for poor countries for trade-related capacity building, perhaps through a financing facility (Oxfam 2000). Currently, the WTO-administered Integrated Framework for Trade Related Technical Assistance has a severely inadequate budget. A financing facility would develop a healthier budget to support training programs and enhance effective representation for poor countries. In times of disputes, they would also seek redress without fear of intimidation or retaliation.

Recommendations for Developing Countries

Continue Policy Reforms

Developing countries should continue with cotton policy reforms launched in the 1990s. While these reforms are not a panacea, they have been successful in important ways. In many cases, cotton growers in these countries have supplied greater quantities, received higher prices, and provided prompt payments. However, reform is slow in some countries, particularly in West Africa. Sustaining the reform efforts would improve on-farm production efficiency in the industry (Baffes 2004).

Diversify Industries

Cotton producing countries should diversify preferably into relatively profitable sectors and not into downstream industries such as textiles and clothing. The latter sectors are unlikely to address any of the difficulties currently faced by the cotton growers since cotton will still be traded at world prices regardless of the location of textiles and in the absence of subsidies or taxes (Baffes 2004). Any efforts to create textile industries should be based on the profitability prospects of the industry itself rather than the location of cotton production.

Establish and Strengthen Strategic Alliances

Finally, developing countries should build and strengthen strategic alliances within the WTO. Examples include the Group of 77 and the alliance between the EU and African Caribbean Pacific countries. Through these

groupings, developing countries could negotiate for more favorable terms and take a common stand on unfavorable measures. The cotton situation provides one opportunity for these countries to rally around the elimination of harmful subsidies.

Recommendations for the United States and the EU

Eliminate Trade Distorting Subsidies

Developed countries should provide agricultural support in a non-distorting manner. The United States can still use subsidy mechanisms such as decoupled support systems because of their basis on past production and prices, and thus lower impact on current production decisions. Such a shift is applicable since EU and U.S. cotton support is in the form of domestic measures. Thus, changing the nature of support does not require changing sources of funding, as it would in the case of border measures (Baffes 2004). Although the EU took concrete steps with the recent cotton reform, it nonetheless fell short from fully decoupling cotton subsidies as well as setting a timetable regarding complete elimination of support. The EU should move to remedy this limitation as soon as possible.

Diversify away from Cotton

Corporations that stand to lose from withdrawal of subsidies should diversify away from cotton farming into areas of production in which they have comparative advantage, for example dairy farming and cereals production. Since amending the AoA is part of a single undertaking negotiated at Uruguay, and WTO law is domesticated in the United States, any additional reforms should –by the same token– self-domesticate, thus limiting executive-congressional branch tensions.

CONCLUSION

Making trade work for the poor implies a broad agenda extending from national governments to the WTO. This article has demonstrated that increasing cotton subsidies has dire implications for sustainable development in Benin, Mali, Burkina Faso, and Chad. It has also established that given the absence of substitute industries, these countries have no choice but to cease production of cotton in the face of declining prices. Improving trade in cotton can play a key role in lifting millions of people who depend on its production out of poverty, the chief Millennium Development Goal. This objective requires prompt policy reforms at both national and international levels. Eliminating trade-distorting subsidies would reaffirm the global commitment to poverty reduction.

As aptly stated by Oxfam, to continue with the present path is not an

option. The status quo would only deprive the poor of opportunities offered by trade and counteract a powerful force for poverty reduction. This article presents a case for reforming the cotton trade order, grounded in new approaches. These policy prescriptions are underscored by a commitment to make globalization work for the poor.

NOTES

- ¹The Fifth Ministerial WTO Conference took place in Cancun, Mexico, September 10-14, 2003. It was intended to mark an important stop on the road to completing the Doha Development Agenda round, but it ended without consensus.
- ²These prices are based on the A-Index cotton price, calculated as the average of the five lowest prices for U.S. cotton in Northern European markets based on a grade of middling up to three - thirty second of an inch fiber length (1-3/32).
- ³Agenda 21 is an unprecedented global plan of action for sustainable development adopted at the 1992 Earth Summit in Rio de Janeiro, Brazil.
- ⁴This West African cotton zone is geographically known as "the Sudanian." It incorporates part of former West Sudan, now known as Chad, and stretches from Senegal on the Atlantic Coast through the inland country of Niger to Chad.
- ⁵The National Cotton Council of America is the face of the cotton lobby. It consists of the producers, ginneries, warehouses, merchants, cottonseed, cooperatives, and manufacturers of cotton. Its mission is to ensure that U.S. cotton industry segments compete effectively and profitably. The Council works with American Cotton Producers, Cotton Council International, Cotton Foundation, and National Cotton Ginners Association.
- ⁶Amber subsidies are to be reduced. They are defined as all domestic supports except those in the blue and green boxes.
- ⁷These remedies include trade retaliation and compensation. Retaliation entails a reciprocal suspension of benefits by the complaining member against the offending member. Compensation is permissible in the event that compliance within a reasonable period of time is not feasible.

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