

# Economic Influences of the Domestic Clothing Industry on U.S. and African Cotton Markets

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## ABSTRACT

Cotton production in the southern United States experienced boom and bust periods during the twentieth century. Immediately following World War One, the average price per pound was twenty-seven cents reaching thirty-five cents per pound by 1919; significant price jumps by comparison to the pre-war period.

Yet the cotton farmer was –and still is– a “price taker,” largely reliant upon prices received for the crop with little room for variable pricing schemes or substantial reductions in overhead. Mechanization in cotton farming by the mid-twentieth century improved output. Government subsidies (both direct and indirect) since the New Deal have artificially supported American cotton production. However, empirical data indicate that continued domestic subsidies of cotton are unnecessary given the comparative advantage of imports.

“Sustainable,” “Organic,” and “Green,” are contemporary marketing terms referring to consumer products. We will examine the increasing interest in organic cotton and how organic farming can enable farmers in developing countries to compete in the current global market.

The purpose of this essay is twofold: 1) examine the effect of US cotton subsidies on all stakeholders; 2) analyze, qualitatively and quantitatively, the influence of the U.S. clothing industry on the demand for both domestic and imported raw cotton.

## Keywords

Cotton, Farming, Gap Inc., Subsidies, Product Stewardship, Organic Cotton, Fair Trade.

## 1 INTRODUCTION

The United States is the world’s largest cotton exporter, primarily due to the \$3.2 billion in subsidies and export credits US cotton growers receive based on annual production. Uzbekistan is the world’s second largest exporter, perhaps because the Uzbeki government controls

all aspects of production and commits egregious human rights violations in order to compete with the low price of US cotton.<sup>1</sup>

Because US subsidies are awarded based on quantity produced, US cotton farmers are encouraged to grow more cotton than is necessary for domestic use. The majority, 75% of US cotton is exported for textile production in countries such as China, Turkey, and Bangladesh. These three nations represent 48% of global cotton imports.

Although the actual cost of production is much lower than in the US, cotton farmers in developing countries cannot sell cotton profitably as long as global market prices remain artificially low. In order to join the WTO, India had to agree not to subsidize its cotton farmers. India’s cotton lint Import/Export ratio is 0.08, while the US ratio is 0.002, China is 120.0, and Uzbekistan is 0.<sup>2</sup>

Studies have shown that the most effective and sustainable way to end poverty involves responsible free market exchange.<sup>3</sup> According to these theories, populations can increase their economic growth through self-sufficiency, lower trade barriers and enforcement of private property rights. There is a general sentiment that charitable donations have been ineffective in improving living standards. In the current fiscal year, the US government donated close to \$1.4 billion dollars in famine relief and emergency aid to African countries.<sup>4</sup> Yet if the subsidies were lifted, much of this aid would prove unnecessary.

The savings to US taxpayers with the elimination of subsidies and reduction in aid would be significant.

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<sup>1</sup> Environmental Justice Foundation report, *White Gold: The True Cost of Cotton*. [www.ejfoundation.org](http://www.ejfoundation.org)

<sup>2</sup> National Cotton Council, [cotton.org/econ/cropinfo/cropdata/rankins.cfm](http://cotton.org/econ/cropinfo/cropdata/rankins.cfm)

<sup>3</sup> Joseph Stiglitz. *Globalization and Its Discontents*. (W. W. Norton and Company, New York. 2003)

<sup>4</sup> The White House, Office of the Press Secretary. *Fact Sheet: Addressing Hunger and Humanitarian Emergencies in Africa*. June 2005. <http://www.whitehouse.gov/news/releases/2005/06/20050607-3.html#>

According to studies by Oxfam, an NGO committed to ending global poverty:

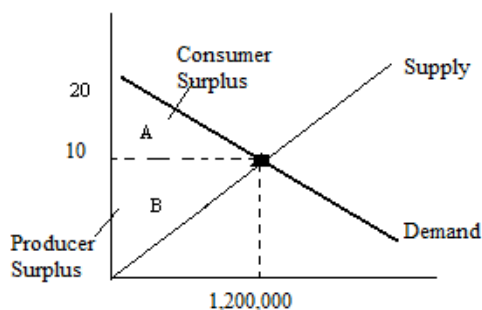
Oxfam estimates that U.S. dumping of cotton on the African market created losses for West African farmers of almost \$400 million between 2001 and 2003. According to World Bank research, reforming cotton subsidies would result in a rise of world prices by an average of 13 percent and create a benefit of \$127 million each year to sub-Saharan Africa.<sup>5</sup>

However, as long as global cotton prices are artificially depressed by subsidies, farmers in developing countries will not be able to compete in the global economy.

## 2 GRAPHIC DEPICTIONS

The illustration below depicts both consumer and producer surpluses accruing to U.S. buyers and suppliers participating in world textile markets. For consumers, surpluses account for the difference in what a buyer is willing to pay and the market price; producer surplus explains the lowest price a seller will accept and the price actually received.<sup>6</sup>

Figure I.



In the following model *cheaper* textile imports to the United States provide consumers a surplus of 9 million, but reduce surpluses received by producers to Area C, or a value of 2 million<sup>7</sup>

<sup>5</sup> Oxfam. Tammi, Leo. *Subsidies Hurt Farmers Thousands of Miles Away*. Richmond Times-Dispatch, August 5, 2006.

<sup>6</sup> For example, if textile users were willing to pay a cost of 20 million for imported material, the value of consumer surplus would be the difference of 20 less the market price ("10") multiplied by  $\frac{1}{2}$  of 1.2 million, or 6 million (Area A). Similarly, producer surplus equals 6 million:  $10 - 0$  ("10") multiplied by  $\frac{1}{2}$  of 1.2 million or 6 million (Area B). Thus, a total benefit of 12 million—theoretically—accrues to both buyers and sellers.

<sup>7</sup>  $20 - 8 = 12$  multiplied by the product of  $\frac{1}{2}$  of 1.5 million equals 9 million. Area C:  $8$  multiplied by  $\frac{1}{2}$  of 500,000

Figure II.

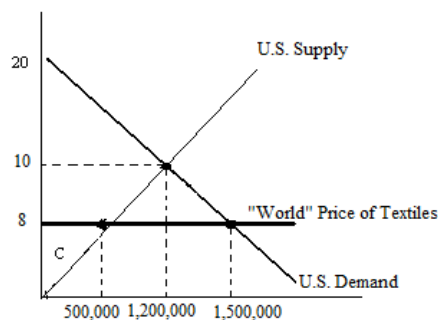
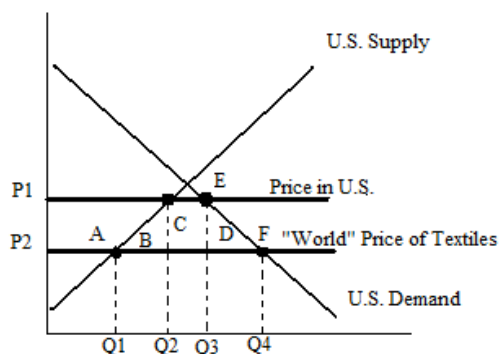


Figure III depicts trade followed by the implementation of a tariff. U.S. textile producers would sell Q2 at a price of P1; producers would in turn, increase the value of their surplus but at the expense of consumer surplus.<sup>8</sup>

Figure III.



## 3 SUBSIDIZATION IN U.S. HISTORY

The genesis of price support legislation in the United States began in the early 1920's, culminating with the implementation of more activist policies during the New Deal era of the 30's. Prior to the New Deal, U.S. officials established uniform standards in grading the quality of cotton production in hopes of minimizing the probability of speculation, and lessening the impact of asymmetry in the cotton markets. Under Secretary of Agriculture Henry Wallace, the U.S. Agricultural Department established a set of worldwide cotton grades<sup>9</sup> basing them upon American

<sup>8</sup> Let P1 represent a price of \$9 and Q2 a quantity of 900,000. In calculating the value of Area A in Fig. 3, producers receive 4,050,000 in surplus, a gain of 2,050,000 given the adoption of tariffs on textile imports.

<sup>9</sup> Donald L. Winters, *Henry Canntell Wallace As Secretary of Agriculture, 1921-1924*. (University of Illinois Press. 1970), pg. 128

standards. Therefore, as a result of the Cotton Standards Act of 1923, growers and merchants had greater cognizance of grade and price information when selling in foreign markets.<sup>10</sup>

The Federal Farm Board adopted a price stabilization program for cotton during the early years of the Great Depression, the collapse in farm and commodity prices necessitating such actions. Providing loans to farm cooperatives using cotton as collateral, the board took over 1.3 million cotton bales in 1930; by 1932, the board held 3.5 million bales.<sup>11</sup> Although the slide in cotton prices leveled off in 1932, losses from the stabilization program proved significant. Sometimes, the unintended consequences of stabilization through price supports and crop reductions exacerbated the problem of lower cotton prices. Aggregate acreage yields did increase, but consumers in the export markets found cheaper, less expensive substitutes.

Mechanization, whereby growers substituted tractor usage for tenant farmers, added to lower overhead costs from the late 1930's throughout the 70's. Consequently, the surplus labor caused by mechanization contributed to a net "out migration" of tenant farmers from the Southeast in the mid twentieth century<sup>12</sup>; congress also reduced price supports for some cotton growers in 1970.<sup>13</sup> Yet deficiency payment systems, whereby cotton farmers –regardless of the profitability of their acreage- receive subsidies for growing cotton, have been in force since the 1970's. As late as 2000, a special program initiative by the U.S. Department of Agriculture sought to pay farmers around \$74 million dollars in order to offset losses in cotton production the previous year.<sup>14</sup>

#### 4 U.S. SUBSIDIES AND AFRICAN COTTON

African critics of U.S. subsidies describe how "The U.S., which is a net exporter of cotton, gave their cotton farmers \$3.9 billion worth of subsidies last financial year, three times more than the aid it gives Africa."<sup>15</sup> Others have opined how "25,000 American cotton farmers divide \$3 to \$4 billion in

subsidies among themselves," with the increased supply on world markets depressing sub-Saharan cotton prices.<sup>16</sup>

One study purports that if the U.S. abolished its cotton subsidies world prices could increase by 6-14%, allowing West African farmers household incomes to increase from 2.3 to 5.7%.<sup>17</sup> Furthermore, in Mali, farmers not only have been harmed by the impact of U.S. subsidies, but must also contend with World Bank policies seeking privatization of the Malian cotton industry.

By comparison to most other regions of the world, Sub-Saharan Africa continues to show a negative economic growth rate in recent years. By most accounts, Africa is the region most in need of economic development. The climate and soil in Equatorial Africa are far more conducive to cotton production than the US. Much of US soil has been depleted by excessive monoculture production. The Natural Resources Conservation Service and responsible agribusiness practices have prevented a recurrence of the Dust Bowl of the 1930's.

In order to earn organic certification from the USDA –and other world environmental agencies- cotton fields must be chemical-free for three years. With this requirement, US farmers would experience a serious loss while growing using organic methods, without the benefit of organic prices for three years. In Equatorial Africa there is still a plentitude of untouched land that can begin certified organic production immediately.<sup>18</sup>

#### 5 PRODUCT STEWARDSHIP

Currently, product stewardship is recognized as an important advancement in business methodology. Companies that ensure their raw materials derive from sustainable sources are proving that stewardship is not as costly as previously thought. In fact, many retailers are capitalizing on the trend toward sustainability and thus capturing market dominance.<sup>19</sup>

Retailers have cited that organic cotton is too expensive, and fear that their customers will not appreciate the external benefits associated with higher prices. US consumers have consistently shown a preference for cheaper goods with little concern for the means of production. For example, the

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<sup>10</sup> Ibid., pg. 131

<sup>11</sup> Clifton B. Luttrell, *The High Cost of Farm Welfare* (Cato Institute, 1989), pg. 8

<sup>12</sup> Glenn Porter, Editor. *Encyclopedia of American Economic History, Studies of the Principal Movements and Ideas. Vol. I.* (Scribner Pub., New York), pp. 382-384

<sup>13</sup> *Agricultural Act of 1970*, taken from Edward L. and Frederick H. Schpsmeier's, *Encyclopedia of American Agricultural History*, (Greenwood Press, Westport, Conn, 1975), pg. 15

<sup>14</sup> Bruce L. Gardner, *American Agriculture in the Twentieth Century: How It Flourished and What It Cost*. (Harvard Univ. Press, Cambridge, 2002), pg. 237

<sup>15</sup> *African Business*, June 2003; [www.allbusiness.com/africa/1096025-1.html](http://www.allbusiness.com/africa/1096025-1.html)

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<sup>16</sup> *Guardian News*, "The Tyranny of King Cotton," [commentisfree.guardian.co.uk/joseph\\_stiglitz/2006/10/stig.html](http://commentisfree.guardian.co.uk/joseph_stiglitz/2006/10/stig.html)

<sup>17</sup> *Oxfam*, "Reform of US Cotton Subsidies Could Feed, Educate Millions in Poor West African Countries," 21 June 2007.

<sup>18</sup> Bambina Wise, "Mozambique Cotton Farmers Reap Reward of China Demand," *Women's Wear Daily*; 5/16/2006, Vol. 191 Issue 104, Special Section p10-11, 2p, 3c

<sup>19</sup> Patagonia, Nike, Timberland, Levi's, Gap, Inc., Nordstrom, Edun, Chaus, Marks & Spencer, and Target, to name a few.

current “quality control” crisis in China is ultimately a result of producers attempting to feed that demand for cheap goods, regardless of the external costs.

Consumer education plays a critical role in product stewardship. By explaining the environmental benefits of organic goods, retailers can increase the demand for organic cotton products. US consumers are increasingly choosing organic comestibles, so retailers are likely to find it easier to convince consumers that they need organic clothing as well. Major retailers such as Gap, Inc. have begun testing the market, providing limited offerings of popular items in organic cotton. One GAP men’s t-shirt could potentially increase global demand for organic cotton far more than an entire collection by a niche label such as Edun.

Studies have shown organic cotton farming is more sustainable, because it does not employ harmful pesticides, and increases soil longevity through crop rotation. However, organic cotton is much more labor-intensive. The organic substitutes for the chemical defoliant used to separate the leaves are costlier and less effective. Hence, manual defoliation is still the most viable option for organic farmers. The market does recognize the higher cost of production, so organic cotton can sell for as much as 30% more than conventional cotton.<sup>20</sup>

This competitive pricing, combined with the environmental benefits, makes organic a significantly more attractive option for farmers in the developing world. As mentioned, organic cotton farming is more labor intensive; US organic cotton farmers to compete without the subsidies they receive.<sup>21</sup> There is practically no domestic market for cotton lint, as most cotton is processed overseas. With globalization, those countries experiencing the lowest cost of production will achieve the highest level of demand. This is as true with organic farming as it is with any labor-intensive industry.

On smallhold farms in countries such as India, organic cotton farming is cheaper to initiate and run than farming using conventional or genetically modified (GMO) seeds. The layout of an organic farm is engineered to deter all pests, and has proven highly effective. The start-up costs of switching from conventional to organic are often subsidized by organizations such as BioRe. Organic farmers find themselves with less or no debt than they had using conventional methods.<sup>22</sup> In developing countries, organic

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<sup>20</sup> Bambina Wise, “Mozambique Cotton Farmers Reap Reward of China Demand,” *Women’s Wear Daily*; 5/16/2006, Vol. 191 Issue 104, Special Section p10-11, 2p, 3c

<sup>21</sup> Jason Mark, *A Loom With a View*, <http://www.grist.org/news/maindish/2006/11/20/mark/index.html?source=daily>

<sup>22</sup> Patrick Hohmann, “From Cotton Growers in Central India to Consumers in Europe,” *Vision and Action for Another World*, Ed. Ulrich Roesch. Earthcare Books, 2004. 109-20.

cotton farms have additional benefits as well.

For example, crop rotation is crucial for maintaining the soil quality, organic farmers are able to rotate with comestible crops and therefore diversify their market offerings. The biodiversity of an organic farm is much more consistent with nature, and therefore more sustainable. On the other hand, some GMO farmers have found that after a few years, they are forced to use pesticides again, either as pests develop a stronger resistance or as different pests become problematic.<sup>23</sup>

*Patagonia* has long been the garment industry leader in product stewardship and holistic sustainability. Not only do they manufacture polyester fabrics using recycled plastics, they also encourage their customers to recycle used clothing. In keeping with their commitment to use raw materials from sustainable sources, *Patagonia* exclusively uses organic cotton, and have become a popular resource for garment manufacturers interested in sourcing organic cotton.<sup>24</sup>

## 6 CONCLUSION

Artificial price constraints hinder global economic growth. Farmers in developing countries are eager to join the global economy, and often have comparative advantages in cotton farming. Resourceful US growers have already begun making the shift to alternative crops. With increasing consumer interest in locally grown food, an organic farmer would find greater success tapping that market than trying to rebuild the domestic textile industry.

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