Chapter 1: Going Green Is No Sweet Deal for Sugar Cane Workers

As more and more attention is given to environmental quality—issues like clean air and global warming, for example—a complex web of externalities will become increasingly apparent and likewise command greater attention and analysis from policy makers. In Chapter One of Modern Labor Economics, externalities were described as a market failure resulting from transactions that resulted in benefits or costs for people who were not party to those transactions. In the case of pollution, private market transactions frequently do not take into account the external costs that pollution, which results from either the production or the consumption of the good being traded. The pollution, however, imposes costs that must be involuntarily borne by many who are not buying or selling the good, thus reducing whatever net social benefit was created by the original transactions.

A recent article in The Wall Street Journal illustrated some of the complexity that can arise in dealing with externalities. According to the article, Brazil is exploring a fundamental change in the way that much of its very large sugar cane crop is harvested. Brazil has long been a major exporter of sugar in world markets, and in recent years it has been a world leader in producing ethanol from cane sugar. Roughly forty percent of the sugar cane crop is harvested with machines, as would be the case with the vast majority of American commercial agricultural production. But the other sixty percent of the Brazilian sugar cane crop is harvested by workers using long machetes to chop the cane down. The work is difficult and often performed under poor working conditions by typically poor migrant workers from some of Brazil’s poorest regions. Sugar cane stalks have razor-sharp leaves that could make the work even more dangerous and difficult, but long-standing practice has growers burn their crops, getting rid of the leaves and making it easier to cut the stalks by hand.

But the burning of sugar cane fields, long recognized as causing significant environmental damage, is now coming under attack. The burning of sugar cane is considered to be one of Brazil’s leading contributors to greenhouse gases, and leaves the air in surrounding areas heavily polluted during the harvest season. This causes respiratory problems for some in the short run, along with the longer-term impact on global warming. An agreement has been reached between the federal government of Brazil and the cane growers, calling for an elimination of all burning by 2017.

The end of burning in the sugar cane fields, while eliminating one externality, will create another one, however. As machine-based harvesting takes over, machete-wielding workers are going to be out of work. A sugar company executive interviewed for the article estimated that each harvest combine employed would eliminate 180 harvesting jobs. Unions representing the workers and city officials, worried about what will happen to this group of already poor workers and hence to the communities they live in, are trying to pressure growers to not convert their harvesting to machines.

This will certainly not be a problem unique to sugar cane or to Brazil. Since the dawn of the industrial age, there has always been a somewhat uneasy trade-off between the improved efficiency of mechanized production and the immediate loss of jobs often associated with it. Part of the trade-off, of course, has always been that jobs were created in making the machines that were replacing workers. That same trade-off will undoubtedly continue as production methods are altered to be more environmentally friendly, creating lots of new jobs to enable the new methods. But the short-term trade-off between jobs and environmental quality will increasingly pose significant challenges for industries and governments around the world.

Source:
Questions:

1. In what sense is the decision to ban crop burning to eliminate the externality of pollution the source of an externality in the labor market?
2. The policy of banning crop burning implicitly decided that the externality of pollution is a more serious problem than the externality of job loss. Is this a positive or normative economic judgment?