

COMMENTARY COVERSHEET

Economics commentary number **1**

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Cummins Inc. Agrees to Pay \$2.1 Million Penalty for Diesel Engine Clean Air Act Violations

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WASHINGTON – Cummins Inc., a major motor vehicle engine company based in Columbus, Ind., will pay a \$2.1 million penalty and recall 405 engines under a settlement agreement resolving violations of the Clean Air Act, the U.S. Environmental Protection Agency and the Justice Department announced today.

According to a complaint filed simultaneously with the settlement in federal court in the District of Columbia, between 1998 and 2006, **Cummins shipped more than 570,000 heavy duty diesel engines to vehicle equipment manufacturers nationwide without pollution control equipment included, in violation of the Clean Air Act.** This equipment, known as exhaust after-treatment devices (ATDs), controls engine exhaust emissions once the emissions have exited the engine and entered the exhaust system. Typical ATDs include catalytic converters and diesel particulate filters.

“Reliable and effective pollution control systems are essential to protect human health and the environment from harmful engine emissions,” said Cynthia Giles, assistant administrator for EPA’s Office of Enforcement and Compliance Assurance. “These requirements are a critical part of EPA’s program to reduce air pollution and secure clean air so that all Americans can breathe easier.”

“This settlement assures that the environment suffers no ill effects because it requires that Cummins not only install the proper pollution control devices but also mitigate the effects of the harmful emissions released as a result of its actions,” said Ignacia S. Moreno, assistant attorney general for the Justice Department’s Environment and Natural Resources Division.

Engine manufacturers must prove through testing that their engine designs meet EPA’s emissions standards and seek certificates of conformity. According to the complaint, Cummins tested the engines with the ATDs to meet the standards, but failed to include the ATDs with the engines when Cummins shipped the engines to the vehicle manufacturers. Instead, Cummins relied upon the vehicle manufacturers to purchase and install the correct ATDs. The United States alleges that the shipment of engines to vehicle manufacturers without the ATDs violates the Clean Air Act’s prohibition on the sale of engines not covered by certificates of conformity.

The settlement requires Cummins to recall approximately 405 engines that were found to have reached the ultimate consumers without the correct ATDs in order to install the correct ATDs.

EPA estimates that Cummins actions resulted in approximately 167 excess tons of nitrogen oxides and hydrocarbon emissions, and 30 excess tons of particulate matter emissions over the lifetime of the non-conforming engines. Cummins will mitigate the effects of excess emissions from its non-conforming engines through permanent retirement of emission credits equal to the excess tons of pollution.

Over half the air pollutants in America come from “mobile sources” of air pollution, such as cars, trucks, buses, motorcycles, construction, agricultural and lawn and garden equipment, marine vessels,

outboard motors, jet skis and snowmobiles. Mobile source pollutants include smog-forming volatile organic compounds and nitrogen oxides, toxic air pollutants such as cancer-causing benzene, and particulate matter or “soot.” These pollutants are responsible for asthma and other respiratory illnesses.

The State of California Air Resources Board will receive \$420,000 of the civil penalty under a separate settlement agreement with Cummins, continuing a federal government practice of sharing civil penalties with states that participate in clean air enforcement actions.

The Cummins settlement was lodged today in the U.S. District Court for the District of Columbia, and is subject to a 30-day public comment period.

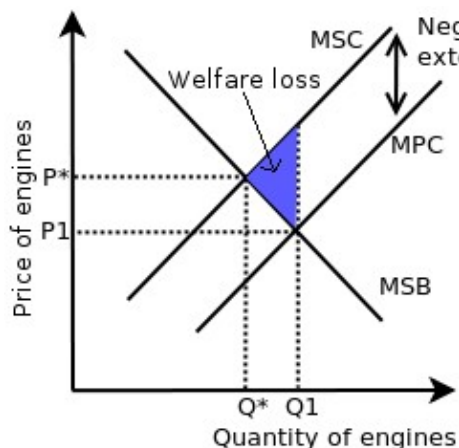
Commentary

The article “Cummins Inc. Agrees to Pay \$2.1 Million Penalty for Diesel Engine Clean Air Act Violations” describes common situation, when government intervenes into market in order to make it more socially efficient. It deals with the phenomenon of **externalities**.

When a market is in equilibrium, with no external effects or influences, it is said it is in state of **Pareto optimality**¹. This means that it is impossible to make someone better off without making someone else worse off. In case the market is Pareto optimal, **MSC** (Marginal social cost) is equal to **MSB** (Marginal social benefit). **MSC** is Marginal cost from the view of the whole society. Marginal cost is cost for producing one more unit of a good. On the other hand, **MSB** is the utility gained from consuming one more unit of a good from the view of the whole society.

If the market is not socially efficient (it is not Pareto optimal) we say, it is a **Market failure**. In this case we will talk also about **MPC** (Marginal private cost) which is basically cost from producing one more good from the view of producer.

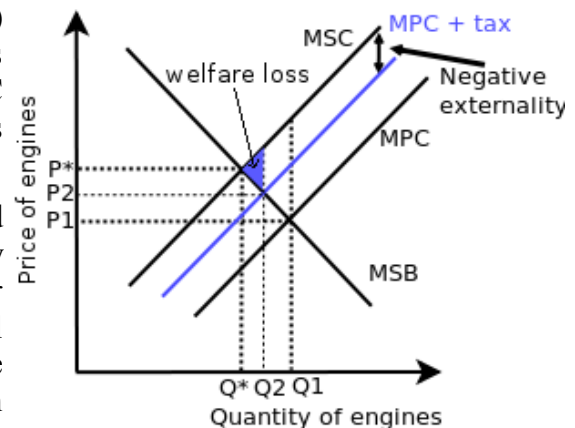
This particular example is the example of **Negative externalities of production**, which is a type of Market Failure. These occur when production of a good cause damage to somebody else – third parties². Therefore, the company has its private cost but it also creates another external cost, which is held by someone else. This means that the cost to the community is higher than the cost for the producer itself (MSC is higher than MPC) and negative external cost is created.



As we can see this is also the case of the company which is the article about – Cummins Inc., the producer of car engines. The problem is that company has shipped more than 570 000 heavy duty engines to car manufacturers (400 engines were found that they have reached the ultimate customer) without required environmental equipment which meant that community has suffered from air pollution – court has made a decision that this was a violation of Clean Air Act. Cummins Inc. has made a settlement in which they agreed to recall all the engines with missing environmental equipment and, on top of that, pay a \$2.1 million penalty.

The first picture shows us this situation graphically. The producer was producing the quantity (Q1) for the price (P1) which is on the intersection of MPC and MSB. Since it was not producing on socially efficient level – where MSC intersects MSB (quantity Q* for price P*) the welfare loss occurred.

The action of US government was clear (second picture) – it intended to decrease this welfare loss by increasing the MPC. In order to achieve it, they kept the air from more pollution in the future by the obligation that all the engines which reached the ultimate customer will be recalled and tried to decrease the cost to the society which was made by this firm in the past by the penalty.



1 Jocelyn Blink & Ian Dorton, Economics Course Companion (1th Edition, Oxford University Press, Oxford 2007) p. 134

2 Ibidem, p. 138

This means that the negative externality was decreased, or completely internalized (if the external cost created by Cummins Inc. was precisely the penalty).

Last but not least, the another good thing, which is written in the article is that part of the penalty which will be paid by the firm will instantly go to the State of California Air Resources Board. This guarantees that at least this part of money paid by firm will be really used to fix the real problems associated with air pollution.