

## THE IMPACT OF WORLD TRADE LIBERALIZATION ON POLLUTION

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World trade liberalization has a multifaceted impact on economic and social indicators and they by-turn affect environmental performance. The links between world trade liberalization and pollution are ambiguous and often difficult to determine because of the variety of ways of mutual influence. We divide those trade-pollution links into two groups.

The first group of links between trade and environment includes the impact of trade on environment through its impact on income, on the amount of production and consumption. Economists first of all emphasize the positive effect of trade liberalization on the economy in the form of income growth. Most studies in the sphere of environmental economics confirm that the growth of per capita income raises demand for environmental quality. Growing demand for environmental quality shifts the structure of consumption toward more ecological goods, makes environmental regulations more stringent and raises standards. This results in pollution reduction, as it should be according to the environmental Kuznets curve. However, income growth promotes the growth of consumption. If the demand for environmental quality is insufficient, the growth of consumption-generated pollution prevails (Fig. 1).

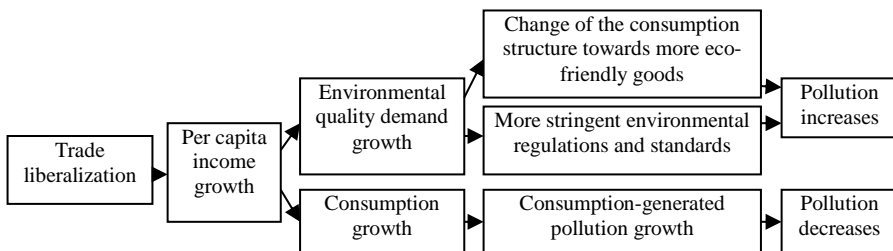


Figure 1. The impact of trade liberalization on pollution due to income per capita increase

Another economically positive consequence of trade liberalization is the increase of an output. As the result of the increase of an output the production-generated pollution rises. Economies of scale causes reduction of prices, which leads to increased consumption and thus consumption-generated pollution rises too. But there are also environmentally sound consequences of the economy of

scale. It can reduce the materials consumption of production, helping to conserve resources (Fig. 2).

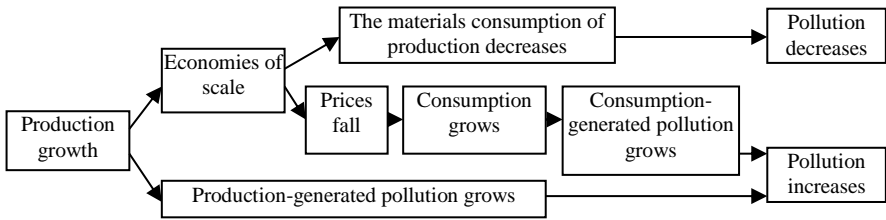


Figure 2. The impact of trade liberalization on pollution due to increase of an output

The second group of links between trade and the environment includes the impact of trade on the environment regardless of income level. When the income is constant the impact of trade liberalization on the environment depends on the situation on the world market, factor supply and other competitive advantages (Fig. 3). International trade liberalization will cause the prevailing development of "clean" or "dirty" production in the country depending on the demand rate for "clean" and "dirty" products in the country. Factor supply stimulates development of production, in which the excess factors are used intensively. According to the factor hypothesis, polluting production tends to be more capital-intensive and to move to countries with more capital (mainly developed). However, besides factor supply, there are other competitive advantages, such as lower environmental regulations. According to the pollution haven hypothesis, "dirty" production moves to countries with less stringent environmental regulations (mainly developing countries). Which of the two effects prevails remains unclear. It is important to note that overall pollution usually decreases if "dirty" production moves to developed countries due to higher environmental standards in these countries and more eco-friendly technology.

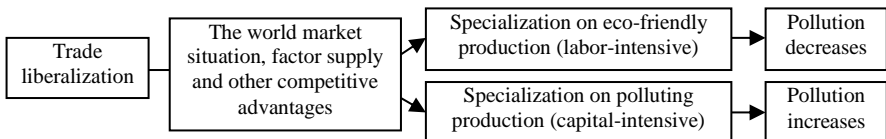


Figure 3. The impact of trade liberalization on pollution depending on the situation on the world market, factor supply and other competitive advantages

Trade liberalization has a direct impact on the number and distance of transportation and thus increases exhaust gases emission and the risk of accidents during the transportation of dangerous goods.

Some consequences of the world trade liberalization definitely increase pollution, others - decrease, but many of them can affect pollution in different ways depending on other factors. Not all ways of trade liberalization influence on the environment are equally important. Some of them may be crucial in determining the overall positive or negative impact on the environment.

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