Paiboon Cheewawinyoo 2008: An Analysis of International Trade and Air Pollution Problem Relationship in Thailand. Master of Economics, Major Field: Economics, Department of Economics. Thesis Advisor: Associate Professor Jerapan Jirananda, M.Econ. 139 pages.

The international trade has played an important role in driving the economic growth of Thailand. Natural resources have been used in the production of exporting goods. As a result, the stocks of natural resources are decreased and the environmental quality declined especially the problems of toxic and greenhouse gases. The objective of this research is to study the relationship between the economic factors associated with international trade and air pollution in Thailand. The Ordinary Least Squares (OLS) multiple regression were applied to the Grossman and Krueger (1991) and Lewis and Mendez (1998) models using the annual secondary data from the year 1990 to 2005.

The results show that the levels of Carbondioxide, Carbonmonoxide, Sulferdioxide, Nitrogenoxide have risen with the rate of openness, composition, capital labor ratio, and energy consumption in the industrial and transportation sectors. For Mathane, the change in production composition to industrial based production decreases the Methane level while the openness, capital labor ratio, area of rice paddies, and the amount of livestocks increase the Methane level. The emission forcast between 2007 - 2017 shows that, *ceteris paribus*, there will be a 48,445 thousand ton increase in the Carbondioxide level, 39 thousand ton increase in the Methane level, 595 thousand ton increase in the Carbonmonoxide level, 198 thousand ton increase in the Nitrogenoxide level, and 306 thousand ton increase in the Sulferdioxide level within the next 10 years.

In order to reduce toxic and greenhouse gas emission, the government needs to implement policies which help cut energy consumption. It also needs to strictly enforce the environmental regulations, offer tax incentives to promote environmentally sound technology, encourage efficient logistic and transportation system as well as promote forest conservation.

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