

ABSTRACT

The Effects of Industrialization on Social and Economic Activities and its Impact on the Balance and Quality of the Environment and On the Sustainable Development on Batam Island

The objectives of this dissertation study are to measure and analyze : (1) the effect of industrialization on environmental balance; (2) the effect of industrialization on quality of the environment; (3) the effect of industrialization on social and economic activities; (4) the effect of environmental balance on quality of the environment; (5) the effect of social and economic activities on sustainable development; (6) the effect of quality of the environment on sustainable development; (7) the effect of industrialization on sustainable development.

Population of this study is the entire area of Batam Island, encompassing 5 sub-districts (*kecamatan*), namely the sub-districts of Sei Beduk, Nongsa, Sekupang, Lubuk Baja and Batu Ampar. The data used are time series data covering a period of 14 years, namely from 1990 through 2003. The data analyses applied are descriptive statistics, confirmatory factor analysis for the respective variables, and the path analysis for hypotheses testing.

Results of the study show that: (1) industrialization has a positive and significant effect on the environmental balance with a path coefficient of 0.971 and a p value of 0.000; (2) industrialization has a positive and significant effect on the quality of the environment with a path coefficient of 1.386 and a p value of 0.045; (3) industrialization has a positive and significant effect on social and economic activities with a path coefficient of 0.912 and a p value of 0.000; ; (4) environmental balance has a significant positive effect on quality of the environment with a path coefficient of 2.153 and a p value of 0.005; (5) social and economic conditions have a significant positive effect on sustainable development with a path coefficient of 0.669 and a p value of 0.009; (6) quality of the environment has a significant positive effect on sustainable development with a path coefficient of 0.135 and a p value of 0.026; (7) industrialization has a significant positive effect on sustainable development with a path coefficient of 0.372 and a p value of 0.018.

Key words: industrialization, social and economic activities, environmental equilibrium, quality of the environment, sustainable development, Batam Island.