

**The Benefits of Establishing a Regional
Economic-Health-Disease Information Network
for Health Policy Planning**



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for the Degree of Master of Science**

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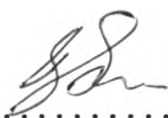
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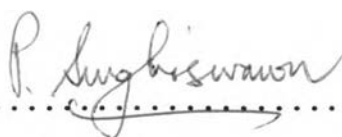
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The objectives of this study are to assess the economic and health benefits of developing a regional information network, and to explore appropriate methodology for data analysis for health policy planning, in which a specific example has been presented in the form of a study of malaria.

This thesis presents a dynamic model which is applied to the analysis of social, economic and health determinants of malaria incidence in Thailand. This model is theoretically based on previous studies and knowledge of factors which can influence transmission rate and patient recovery rate of malaria. Socioeconomic variables included in the testing model are income, occupation, population density and family size. Environmental and infrastructure factors include forest coverage, rainfall, temperature, population per telephone and population per passenger car. Health care provisions considered are health budget, physicians, nurses, hospital beds and the activity of blood examination.

Multiple regression analysis is employed for this model estimation. The model is tested using data collected from different sources in 1992 at a macro level of Thailand. The results show that, of factors being considered in relation to malaria control activities, educational level, forest coverage are the most significant determinants of the malaria incidence rate.

A framework for assessing the economic efficiency and equity in health resources distribution has been developed. For improving allocative efficiency, one method of calculating optimal conditions is presented, which shows how redistribution of health expenditure can lead to an improvement in the proportion of cases prevented. The inequality measure (GINI Coefficient) is used to assess the degree of inequality of health resources distribution in Thailand. Equity level of resource distribution and resource gaps by province are provided as an indicator that health policies can be adjusted to move toward greater equity in the health care system.

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