

# System Dynamics Approach to Explore the Relationship between Elementary Teacher Policy and Educational Finance in Taiwan

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## ABSTRACT

Education is an important indicator of national competitiveness. The 21st century is the century of globalization. Governments around the world have to develop various education policies in response to changes and challenges of the environment. Education development depends on education policies. The planning and implementation of the education policies must put emphasis on both resolving the fundamental problems and facilitating the education development. Elementary education is the foundation of all educations. The development of elementary education in Taiwan is facing great challenges as a result of the changes of government education policies, social and economic environment, and the global situation. The serious disequilibrium between supply and demand for teachers and the financial bankruptcy crisis are particularly the problems of elementary education in Taiwan. Accordingly, Taiwan's elementary education development is on a complex and dynamic process, subject to the government's financial ability, education budget planning, education policies and laws, the birthrate trends, and environmental factors. These factors interact with each other, forming the complex and dynamic systems. This research uses System Dynamics as the methodology to explore the structure of Taiwan's elementary education system for the purpose of identifying the causes of the teacher supply and demand imbalances and financial crisis. Research shows that the teacher supply and demand disequilibrium and the financial crises are governed by the internal variables and the interaction of the environment variables. This study also simulates the dynamic effects of the related policies promoted by the author according to the research analyses. The findings from these investigations are comprehensively discussed.

Keywords : System Dynamics、Dynamic Simulation、Policy Analysis、Elementary Education、Teacher Supply and Demand、Education Policy

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