Evaluation of Tottori economic growth strategies based on a forecasted input-output table of the year 2020

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Input-output analysis has a practical problem that data of years out of date make its results ineffective especially for evaluation of policies at the present and the future. In this study, we proposed an estimation method of future input-output tables based on information-geometric decomposition. Our method consists of two parts, one is decomposition of the table into terms of marginal sums and interaction, and the other one is reconstruction using updated terms based on past statistics and original industrial survey. We applied it with an experimental study with Tottori prefectural government and made an original input-output table of the year 2020. Using the table, we evaluated economical ripple effect of Tottori economic growth strategies. As a result, an industrial sector of environmental energy was found that it had more economic impact than expected, since it had many links with other industrial sectors. This study realizes cost saving for making the tables and secure a real-time property of the tables. Obtaining this new table enables local government to simulate economic effect of their candidate policies, and it shows our data prediction makes a difference in local administration by aggressive application of numerical simulation.