7. The sensitivity analysis of the evaluation model

We only consider seven evaluating indexes to evaluate a lake in our evaluation model. Obviously, these indicators are incomplete. As for the other indicators, we assume that they are all at the optimal conditions. But actual situation is not always like what we assume. We test the sensitivity of the model with environmental awareness.

The environmental awareness belongs to the index system of social environment. The uncertainty of environmental awareness is large in the actual cases. We analyze the fluctuation of the result under different environmental awareness.

Sensitivity calculation results are as follows:

公式11



$$S(z,x\_e)=\**frac**{dz}{dx\_{e}}\**cdot**\**frac**{x\_e}{z}=**-3.06 $$**

As we can see from the results, evaluation model is greatly influenced by environmental awareness. The reason for this result may be that the environmental awareness influences some indexes. What’s more, stability of our model also need to be further improved.