Review of: "Various Comparative Studies of Constantly Applied Methods in Assisting the Demography Research of China"

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Potential competing interests: No potential competing interests to declare.

This paper is well-written in its current form. The following reasons can explain why this paper is suitable to be published in Qeios:

This paper mainly focuses on comparing constantly applied mathematical models to examine and predict the population quantity, female size, and urban population size of China.
The author initially compared the effectiveness of several interpolation algorithms to add more samples and then constructed two more comparative studies of the Malthus model, Logistic model, GM (1, 1) model, BP neural network, and Leslie model to assist demography research in China. Especially, three novel metaheuristic algorithms were applied to the Logistic model. Compared results verified that metaheuristics can assist the Logistic model in obtaining far more accurate parameters and also revealed that using the Logistic model combined with a novel metaheuristic to predict the population quantity and urban population size and the BP neural network to estimate the female size can acquire the most ideal results.
At the end of the article, the author resampled the interpolated datasets to simulate and compare the effects of different census periods, which led to the conclusion that the census period of China can still be set to 10 years due to relevant resampled datasets, which can assist the prediction model to generate almost the same effect as more densely resampled datasets and make estimations faithfully.
One suggestion: Is it possible to make the included codes open-access? I personally think it is better for the community to understand and implement the ideas presented.

Additionally, there are few recent articles that use metaheuristic global optimization algorithms that may be included in the Introduction section:

1. Arka Roy, Thatikonda Suresh Kumar, and Rajat Kumar Sharma. *"Structure estimation of 2D listric faults using quadratic Bezier curve for depth varying density distributions."*, Earth and Space Science, vol. 9, no. 2, e2021EA002061, 2022. I.F.- 3.1

2. Arka Roy, Chandra Prakash Dubey, and M. Prasad. *"Gravity inversion of basement relief using Particle Swarm Optimization by automated parameter selection of Fourier coefficients."*, Computers & Geosciences, vol. 156, p. 104 875, 2021. I.F.- 4.4

3. Arka Roy, and Thatikonda Suresh Kumar. *"Gravity inversion of 2D fault having variable density contrast using particle swarm optimization."*, Geophysical Prospecting, vol. 69, no. 6, pp. 1358–1374, 2021. I.F.- 2.6

4. Arka Roy, Chandra Prakash Dubey, and M. Prasad. *"Gravity Inversion for Heterogeneous Sedimentary Basin with b-Spline Polynomial Approximation using Differential Evolution Algorithm."*, Geophysics, vol. 86, no. 3, F35–F47, 2021. I.F.- 3.3