Natural Hazards
and Earth System
Sciences

Open Access

Discussions

NHESSD

Interactive
comment

Interactive comment on "Assessment of ripple effect and spatial heterogeneity of total losses in the capital of China after a great catastrophe shocks" *by* Zhengtao Zhang et al.

Zhengtao Zhang et al.

zhangzhengtao@mail.bnu.edu.cn

Received and published: 16 January 2017

This paper tries to assess the ripple effect and spatial distribution of total capital loss after a natural disaster event. Such topic is really interesting and important for natural disaster risk analysis. The data of capital loss for some specific sectors or regions are not easily to obtain, but such data are significant for the total economic impact analysis after the disaster. This paper provides a useful method to calculate the direct and indirect capital loss for each sector and also gives different scenarios to analyse the ripple effects of indirect economic loss. General Comments: 1. Page 2, line 7-10 Indirect economic loss has a very clear definition, but what is the direct part? It is better to give the definition of "direct economic loss". Response: Thanks for your comments.

[Printer-friendly version]

[Discussion paper]

We agree with your comment. We have added the corresponding description on Page 2, Line 8, please check the revised manuscript. "For the direct economic loss, it belongs to the physical damage when it occurs in an instant and the induced physical impact after the disaster (Cochrane, 1997)."

2. In Page 2, line 13-16, it mentions, "The Input-Output (IO) model and Computable General Equilibrium (CGE) model are two representative models which are commonly used to assess indirect economic loss." but in this research, only the Input-Output model is used. Why? It is better to explain why you choose IO model, but not CGE model. Response: Thanks for your suggestion. We added a paragraph to describe the difference between the IO model and CGE model on Page 9, Line 15: ".....This model is based on traditional IO model, and combines some advantages of CGE model. CGE model considers many complicated factors based on nonlinear thought such as market feedback, price change, but it also demand detailed statistical data and complicated process of parameter validation. These data are difficult to acquire at the scale of "unban" even "streets/ (villages and towns)". Therefore, ARIO model is appropriate in this study, it takes a full consideration on economic characteristics......."

Please also note the supplement to this comment:
http://www.nat-hazards-earth-syst-sci-discuss.net/nhess-2016-354/nhess-2016-354-AC2-supplement.pdf

---