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Interactive comment on "An evaluation of influential factors on landslide mobility during the 2008 Wenchuan earthquake" *by* D. P. Guo et al.

Anonymous Referee #3

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The discussion paper show an unusual subject related to the 2008 Wenchuan earthquake-triggered landslides. In this paper, 46 large landslides triggered by the earthquake were selected as samples to carry out correlation analyzing between six factors and mobilization of the landslides. The resulting regression formula is helpful and has reference value to other studies. I give a moderate to major revision to the manuscript due to the following points. In conclusion, I keep an objective attitude to the discussion paper and encourage the authors can revise it carefully. (1) About the introduction. The current research status of the issue is valuable, mainly including two aspects, regional studies about the Wenchuan-earthquake triggered landslides, and landslide mobilization, both of which is in detail and have valuable to readers. The related study of the issue is very scare related to the Wenchuan-earthquake triggered

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landslides, although there were many publications in which discussing on this issue about landslides related to other triggers, such as rainfall or unknown triggers. Therefore, I think the topic of the manuscript is very valuable and urgent. In addition, I noticed that the topic is not only have few concerns in the Wenchuan earthquake, but also other earthquake events (such as the 1999 Chi-chi earthquake, the 2010 Yushu earthquake, the 2013 Lushan earthquake, 2010 Haiti earthquake etc.). Therefore, I suggest the author to read several more papers of these earthquake events, and supplement the knowledge in the section introduction, which can strengthen the meaningful and valuable of the manuscript. (2) As the authors cited previous studies, tens of thousands of landslides were triggered by the earthquake. However, only 46 landslide cases were selected in the study, only occupied 0.02-0.03 % of the total landslides triggered landslides. Could the 46 landslides represent the characteristic of the total landsides triggered by the Wenchuan earthquake? Therefore, I suggest the authors point this limitation in the section of "discussions". In addition, I suggest the author can carry out a new study contain more landslide cases with a more in-depth research in future. (3) In section 4.2, four predictive models include Scheidegger, Legros, Corominas, Hunter and Fell should be represented in the main text, similar as the formula (2), which can be easily understand by readers. (4) There area many language errors throughout the main text, I suggest the paper need a careful language proofreading by a native English speaker. For example, the following points can be seen throughout the main text: Should the title more appropriate changed to "An evaluation of influential factors on landslide mobility related to the 2008 Wenchuan earthquake" Page 2: Line 5: travel path to traveling path? Line 18: occurs to be occurred. Line 24: authors to be researchers. Page 3: Line 13: to explore correlations between influence factors and landslide mobilization. Line 14: which factors, have effect to be have effected Page 6: Line 2: based on landslide boundaries ?

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