

## ***Interactive comment on “Transitional relation exploration for the typical loess geomorphologic types based on the slope spectrum characteristics” by S. Zhao and W. Cheng***

**Anonymous Referee #1**

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Paper contains rather trivial information about distribution of slope inclination in the Loess Plateau in China. Paper does not provide any new information; it is just a computational transformation of one data set (CDG and SRTM) into a numerical compilation of occupancy of slope of given inclination on terrain classes as indicated by CDG. Methods are very primitive, just limited to recalculation of data using Excel. Moreover, I have doubt if  $R^2$  and regression line are calculated correctly. I cannot imagine any numerical dependency between histogram class and its frequency as authors calculated. Also, if regression line is of fourth order ( $x^4$ ) it can fit any distribution, so very high  $R^2$  is not a surprise and means nothing. This is entirely wrong concept.

The structure of the paper is correct but does not contain any valuable information.  
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Introduction contains a brief literature overview (most of it is irrelevant for the problem). Study area contains information about study area location and data sources. Part 3 contains a brief description of methods. Results contain a brief description of tables and charts available in the paper. There are some sentences which I cannot understand: for example, what does it mean that regression equations are very close to the slope spectrum histograms? (Sec. 4.4) Section 4.5 has no connection with previous ones. It is just application of common knowledge about general geomorphometry of tablelands, and does not stem from results.

It looks like tables 1, 2 and 3 contain the same information like figs: 2, 3 and 4.

What is missing: 1) Images showing investigated forms 2) Deeper statistical analysis including significance tests between slope distribution in all classes, significance test for conclusions 3) Basis for results: What fig 6 means and how it stems from the data? Analysis presented by authors does not provide any basis for any conclusions 4) What is the novelty of their work except tabular statements? Can they formulate any numerical model of anything?

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Interactive comment on Earth Surf. Dynam. Discuss., 2, 95, 2014.