

Re: Testing the Homogeneity and Sufficiency of empirical data

Source: <http://sci.tech-archive.net/Archive/sci.stat.math/2005-09/msg00223.html>

- *From:* Richard Ulrich <Rich.Ulrich@xxxxxxxxxxx>
 - *Date:* Tue, 13 Sep 2005 13:30:10 -0400
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On Mon, 12 Sep 2005 08:29:59 EDT, Idoia <idoia30@xxxxxxxxxxx> wrote:

> Hello,

>

> In order to be able to use statistical tools to calculate reserves for a Professional Indemnity and a Medmal book, my state insurance department requires that I prove that the data that I'm using is Homogeneous and Sufficient for statistical analysis.

>

> ¿Any ideas on which methods I can use to test this?

In the 3 or 4 examples that I have seen where a state or federal regulation required details like that, the government provided very explicit guidelines as to what was acceptable, and how to do it. Or, what the competing statistical options were. Your options, I think, are: (1) Ask your boss. (2) Google for the law.

In other words, do what they say to do; don't re-invent the wheel. Even if you invent a better wheel, you will have to show someone (possibly, bureaucrats rather than statisticians) that it is a wheel, and then, that it is better.

>

> For Homogeneity, I've read that histograms are used:
[snip, detail]

They probably want something more formal than looking at histograms with arbitrary groupings.

>

> For Sufficiency, I found a paper stating that your minimum sample size for estimating the mean within d% of error with a% confidence level is:
[snip, detail]

If that is how they want to estimate "sufficiency", you still need to look up their details to see what error range

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they consider acceptable.

[snip]

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Rich Ulrich, wpilib@xxxxxxxx

<http://www.pitt.edu/~wpilib/index.html>

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- *Follow-Ups:*
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◇ From: Idoia
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