

Re: Do you want it?

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- *From:* "Greg Heath" <heath@xxxxxxxxxxxxxxxxxxxx>
 - *Date:* 18 Aug 2006 08:28:09 -0700
-

Reef Fish wrote:

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Reef Fish wrote:

I think Greg's attention span is good only for a few lines. So, I'll snip all except those few line:

I think the emphasis in a "sample variance" is that it is obtained from a SAMPLE of data values. The criterion of estimation does not alter the fact that they are all called "sample variance", as a short for of "sample estimate of the population sigma under criterion #".

What modifications to above discussion result when the population mean, M , is known and the unbiased estimate for the covariance matrix is

$$S = \text{Sum}(X_i - M)(X_i - M)' / N ?$$

Hope this helps.

Re: Do you want it?

You should snip that line from your sig file. What you post seldom helps anyone.

That's debatable.

In this case, you're asking a question that is already answered.

I inferred that it had been answered. However, I can't find where it had been directly asked. Therefore I made it a point to get a direct answer to a direct question. In particular,

"Does any part of the sample variance discussion change when the population mean is used instead of the sample mean?"

Simple direct question asked.

Simple direct answer expected, i.e., either "No" or "Yes, because ...".

A bit too advanced for you to figure out the logic, isn't it, that the answer is "NO" ?

I figured the answer had to be NO. However, I was not absolutely 100% sure. Therefore, for my benefit as well as others, I wanted a direct answer.

You S came from a SAMPLE didn't it?

Of course. However, that's not the point. See the word SAMPLE?

But that WAS the whole point.

That was YOUR point...which was well made. However, I was trying to clarify a condition upon which previous replies "appeared" to be based (if not from you, then someone else). Namely, the repeated phrase "when the population mean is unknown". If that phrase deserved to be repeated, then certainly the clarification that nothing changes when the population mean is used is worthwhile.

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Now that you've said NO, let me ask you a potentially redundant question:

Does the test statistic $N*s^2/\sigma^2$ (using M) have the same probability distribution as $(N-1)*s^2/\sigma^2$ (using XBAR)?

I even had the whole post trimmed down to 4 lines so that even with your short attention span you wouldn't miss the point:

I got your point a long time ago in another thread. However, you still haven't gotten my point.

I think the emphasis in a "sample variance" is that it is obtained from a SAMPLE of data values. The criterion of estimation does not alter the fact that they are all called "sample variance", as a short for of "sample estimate of the population sigma under criterion #".

So, what's the relevance of the unbiased estimate of the covariance in your question?

An equation with M instead of Xbar for clarification.

Makes no difference in calling it a SAMPLE variance as long as it is computed from a SAMPLE. The M or unbiasedness are irrelevant.

I agree. Again, however, I was addressing another issue. Namely, what differences are there in using a sample variance based on the population mean vs the sample mean? The most important of these is probably the answer to the question "Are the same distributions assumed for the sample statistics?"

RF says to Greg the slow learner

Re: Do you want it?

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It's hard to learn when the so-called teacher prefers to repeatedly answer his own question instead of yours.

You and Luis A. Afonso should make a good team.

I wouldn't think of breaking up your tag-team tirades.

Hope this helps.

Greg

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