

Re: r-Squared Question

Source: <http://sci.tech-archive.net/Archive/sci.stat.math/2005-07/msg00340.html>

- *From:* "Reef Fish" <Large_Nassau_Grouper@xxxxxxxxx>
 - *Date:* 14 Jul 2005 19:54:49 -0700
-

Jerry Dallal wrote:

> Reef Fish wrote:

>>

>> Jerry Dallal wrote:

>>

>>>Reef Fish wrote:

>>>

>>>>Jerry Dallal wrote:

< Snip >

>>>Also, p 241:

>>>

>>>"The coefficient of multiple determination, denoted R^2 , is defined as

>>>follows:

>>>(7.35) $R^2 = SSR/SSTO = 1 - SSE/SSTO$

>>

>>

>> That's better, as the definition.

>>

>> Ah, this came FIRST, didn't it? (7.35). You were putting (7.71)

>> first in this post as if it were the definition when Neter et al

>> were just relating some of the ANOVA table entries to little r^2 ,

>> in the SIMPLE regression chapter, I presume, because the relation

>> applies ONLY to simple regression.

>

> No, not a typo. The page numbers and equation numbers are correct. r^2

> is defined for simple linear regression; R^2 for multiple regression.

Never said THAT was a typo. Read what I wrote again. I said you chose to show (7.71) FIRST, instead of the definition (7.35).

>>

>> "It measures the proportion of total variation fitted by the

>> regression".

I've been using that for DECADES in my Lecture Notes.

Re: r-Squared Question

>
> That's why I like your suggestion of "variation fitted". No text that
> I've read has an equally suitable replacement for "explained by". It's
> all mumbo-jumbo.

I am quite sure others have used much less misleading terms than "percent variation explained". My co-author Harry Roberts did use the word "explain" but immediately explained at length that it must NOT be taken to mean causal or other meaning of "explain". In retrospect, I should have suggested the simple, unambiguous wording of "variation fitted" because that's all it is, no more, no less.

>> So, what happened to this:
>>
>> JD> Kleinbaum et al., latest: $(\text{RegSS}-\text{ResSS})/\text{TotSS}$
>>
>> RF> IMPOSSIBLE! It's WRONG. That's not R^2 at all. I assume it's
>> RF> your copying error.
>>
>> or how YOU and the others got the $R^2 = -.03$?
>>
>>
>> I assume it's typo and carelessness respectively, but wanted to know
>> if otherwise.
>>
>> -- Bob.
>>
>
> Typo, yes; but not completely careless

Sorry, the "respectively" did not make it clear that the typo was referring to ONLY

>> JD> Kleinbaum et al., latest: $(\text{RegSS}-\text{ResSS})/\text{TotSS}$
>>
>> RF> IMPOSSIBLE! It's WRONG. That's not R^2 at all. I assume it's
>> RF> your copying error.

which you posted for the first time. So, what was ACTUALLY in Kleinbaum's book?

> because I posted a correction
> right after I'd sent the initial message. On my site the original is
> stamped 5:21 pm, the correction at 5:33, and your question about it 7:12
> pm. Perhaps you missed the 5:33 post. It *was* in the same thread, a
> reply to my own post.
>

Re: r-Squared Question

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> --Jerry

The "careless" was referring to

RF> > or how YOU and the others got the $R^2 = -.03$?

In Google, you made THREE consecutive posts, at 8:08 pm, 8:16 pm and 8:27 om of July 12.

Your correction of your own post (8:27 pm) was this:

JD> I've canceled my earlier post, but given the way cancels

JD> propagate, some copies of the original will survive. So, for the

JD> record, keep this post and the one with $R^2 = -0.03$, and ignore the one

JD> with $R^2 = 0$.

You KEPT the $R^2 = -.03$,

which certainly did not follow from any of the definitions you cited.

-- Bob.

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• *Follow-Ups:*

- ◆ **Re: r-Squared Question**
◇ From: Jerry Dallal

• *References:*

- ◆ **r-Squared Question**
◇ From: Predictor
- ◆ **Re: r-Squared Question**
◇ From: Radford Neal
- ◆ **Re: r-Squared Question**
◇ From: Predictor
- ◆ **Re: r-Squared Question**
◇ From: Jerry Dallal
- ◆ **Re: r-Squared Question**
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