

Hi Mark,

I attempted to disentangle QTD from regular seasonality in that State Tourism series (UCTOT8TK) where it was found that if static TD was included, the series was declared "non-seasonal". Excluding TD on the other hand made the series seasonal (S*I values lower by $\sim 1.5\%$ in Qtr 1).

This is consistent with a 'Length of Qtr' correction. SEASABS only applies a LOQ correction if TD estimation is specified in the options. Thus, turning off TD also turns off LOQ correction so that any LOQ effect will appear in the S*I's. Thanks to Tom for confirming this unintuitive SEASABS behaviour. Also, it's good to see that the ratio of number of days in Qtr 1 to the average over all quarters in a year is $\sim 1.4\%$, consistent with the above.

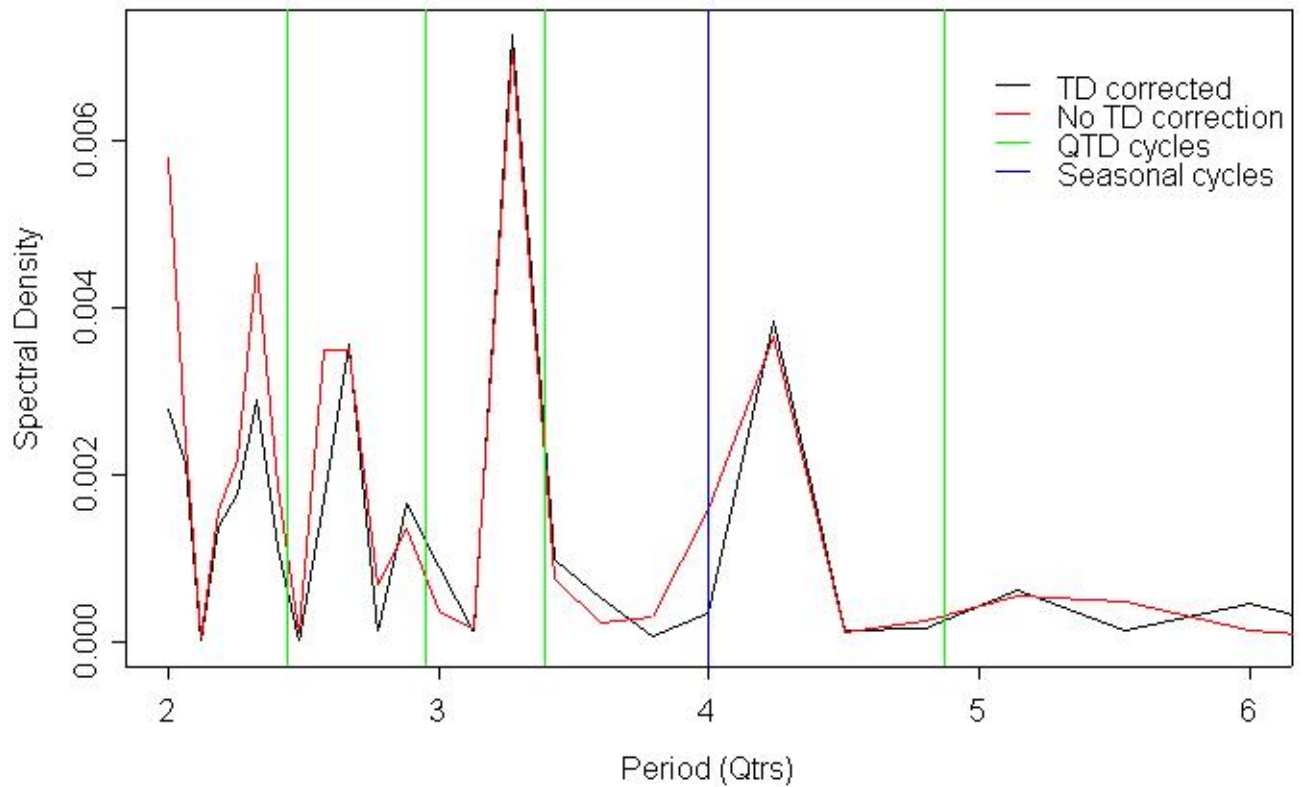
Nonetheless, I did compute some spectra from D8 (unmodified S*I series). It appears that QTD is still masqueraded by usage of a 5-term X11 TMA, i.e. this admits too much power in the trend at the main QTD frequencies so that QTD effects will cancel out when divided into the originals to estimate S*I. If the series is short and/or noisy, then there's no hope. D8's are just as useless as the D13's for QTD purposes.

Here are some examples:

State Tourism Qtr series from above (with/without static TD):

- Not much hope. Pretty noisy. Although I wonder if undersampling in freq domain is causing a shift in some of the QTD peaks, e.g. is there really a strong QTD peak at the expected cycle 3.394?

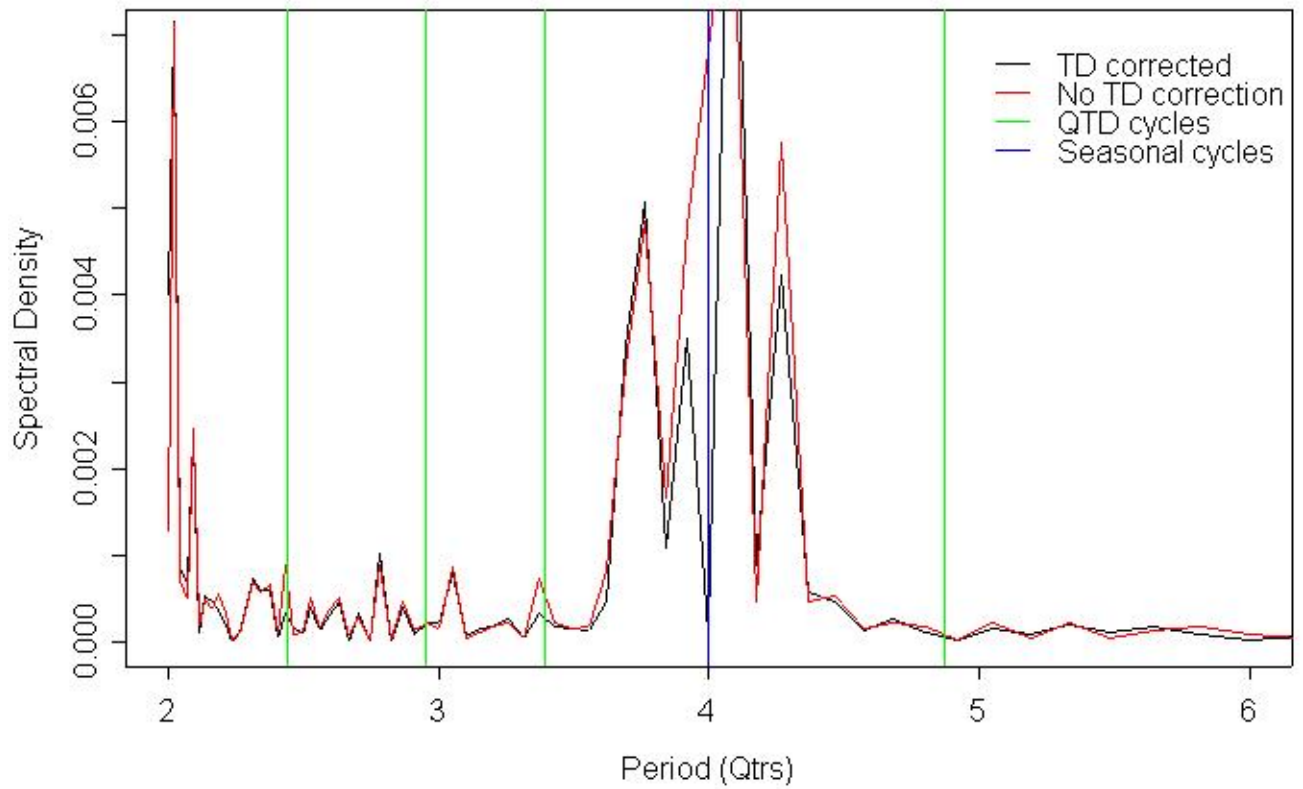
Spectra of S*I (D8): STA series



National Accounts Qtr series: "Aust. HXPH" (with/without static TD):

- Just for fun: since the span is long and volatility low, this is a good example where blips at some QTD freqs are seen in the uncorrected TD case - i.e. at expected cycles 2.435 and 3.394!

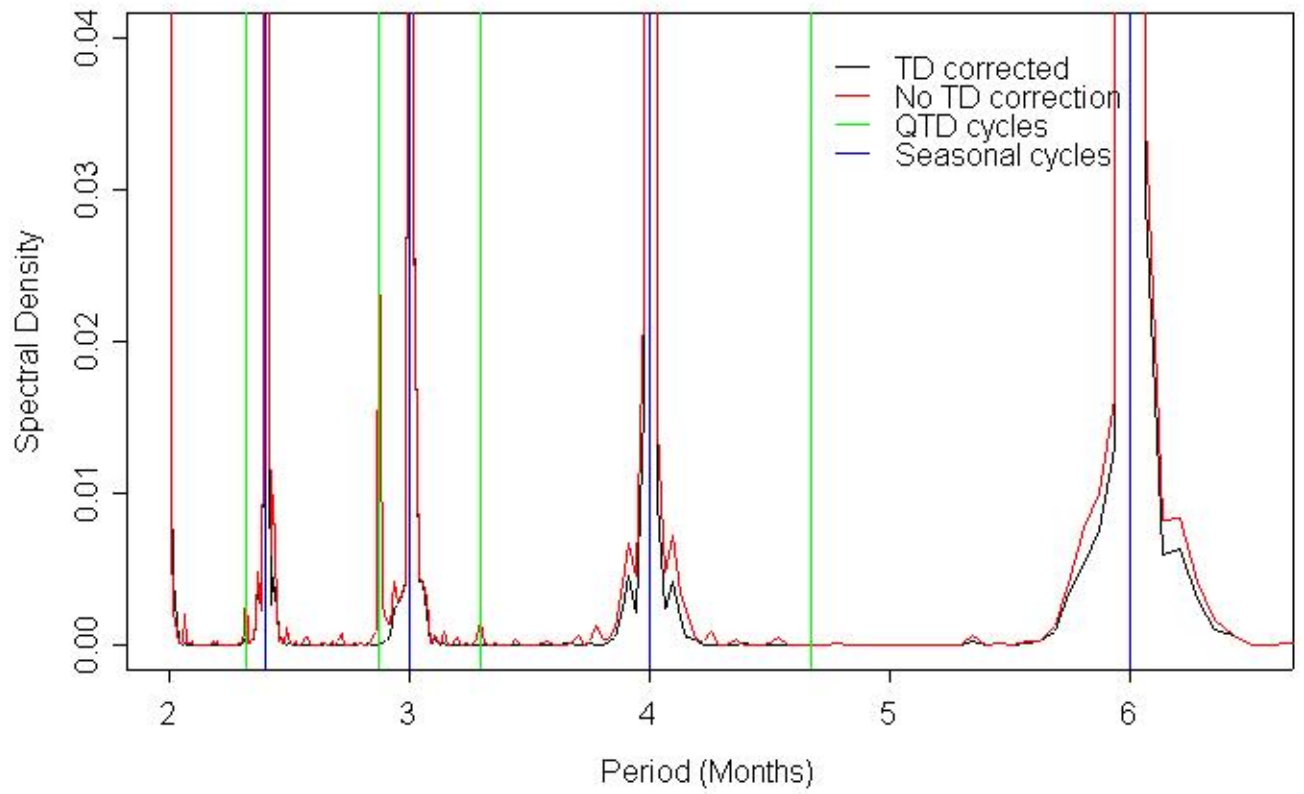
Spectra of S*I (D8): Nat.AccHXP series



[Retail PG98 monthly series \(with/without static TD\):](#)

- Just for fun (and a sanity check): indeed, blips are seen at expected TD freqs:
i.e. at cycles 2.32, 2.87, 3.29.

Spectra of S*I (D8): "Retail (PG98)"



Regards,
Frank M.