

We thank the reviewers for their helpful feedback which has led to many improvements in the paper. The point by point description of changes are below: the reviewers' comments are in red and our response is in black.

## Reviewer 1 comments

## Reviewer 2 comments

P5L37 'Temporal data tools need to catch up.' This is a little casual. Could perhaps be rephrased as 'This paper and the associated **tsibble** R package extends the tidy way of thinking to temporal data.'

Done.

P7L44 'A variable number of time representations can be spotted in the wild.' This is a little casual, and I'm not fond of 'variable number'. Perhaps 'Many different representations of temporal data can be spotted in the wild.' (The 'spotted in the wild' is still a little informal – but I like it.)

Done.

P7L50 'This diversity and time zone...' suggest rephrase 'The tsibble's index column leverages the date-time data type in R to accommodate diverse temporal representations and associated time zone information.'

TODO.

P8L16 'The identifying variables from which the "key" is constituted remain the same as in the original table with no further tweaks.' It's not totally clear to me what is meant here. Is it saying that like with grouping columns (i.e. columns supplied to `group_by()`), key columns cannot be altered in subsequent analyses? It might be useful to make the comparison to `group_by()` explicit as it also allows multiple fields. The distinction between `group_by()` and `key()` is clear in that the collection of columns that constitute a key must uniquely identify observations (obviously this isn't the case for grouping variables).

TODO.

P8L55 'fit models that expect **regular** time series.' Should regular be added to the sentence.

Done.

P10L19 'Duplicates signal a data quality...'

Done.

P12-13 Consider referencing 'fable: and possibly 'mable' too.

TODO.

P14-15 I had to read section 5.2 a few times before I understood it... I think what threw me was the last paragraph starts with a reference to purrr, but the functions described in the remainder of the paragraph describes functions in the tsibble package. Perhaps move the purrr sentence up to the previous paragraph when functional programming is first mentioned.

TODO.

P15L46 '...table verb achieves in collapsing a tsibble...' perhaps '...table verb collapse a tsibble...'

Done.

P15L53 'On the other hand, these tsibble verbs can incorporate many third-party vector functions to step out of the current tsibble zone' perhaps 'The extensible design of the tsibble package means that the table verbs can incorporate many third-party vector functions.'

Done.

Fig 5 y-axis doesn't need the overall label 'Delayed' or if it stays, should be renamed 'Status'. Similarly for the legend label.

TODO.

Fig 6 Consider replacing gather() with pivot\_longer() which is intended to be easier to use particularly for more complex 'gathering' operations. <https://tidyr.tidyverse.org/dev/articles/pivot.html>

TODO.

Fig 7 y-axis label should be 'Proportion of flights delayed' or similar. Legend label 'Originating airport' (but legend can also be removed, because it is covered by the facet labels.

TODO.

Fig 9 y-label 'Departure delay (mins)'. X-axis could be converted to time... e.g. ggplot2::scale\_x\_time() Could introduce some alpha transparency to the geom\_line(). Caption text currently states 'Passengers are apt to hold up around 18 during a day, and are recommended to travel early. The variations increase substantially as the upper tails.' Both sentences need to be reworded.

TODO.

P22L3 'might be joined' should it be 'can be joined' or perhaps a bit more detail, 'Aggregating the half-hourly electricity data to the same daily time interval as the temperature data allows us to join the two data tables to explore...'

TODO.

P22L27 Suggest a reference to Wang, E, D Cook & RJ Hyndman (2018) to explicitly acknowledge that the frame\_calendar() function is part of a different package (sugrants).

TODO.

P22L37 'degrees C' to 'degrees Celsius' or °C

Done.

Fig 12 remove legend label 'hot'

TODO.

P25L19 It's not 'A missing piece of the tsibble package' because later in the paragraph it says that custom calendars are easily embedded in the tsibble framework. I suggest rephrasing the first sentence in a more positive light. . . 'The tsibble package can easily be extended to accommodate user-defined calendars.' Suggest also referencing at least one package that provides a user-defined calendar (perhaps a market-specific business calendar).

TODO.

P26L54 there's an errant

Fixed.

P28L22 Journal of Statistical Software

Fixed.