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Using JDemetra+ in R: from version 2 to version 3
Presentation 2: Seasonal adjustment in R

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Outline table

Data formats

here, no workspace structure - assets - shortcomings

SA process

- identifying seasonality
- pre treatement
- decomposition
- output series
- diagnostics
- customize parameters
- repeat..

comp with GUI main panels ?

rjd3 suite of packages for SA

in v2 :

in v3: more tools (tests,. . .)

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Identifying seasonal patterns

Normality test

Autocorrelation

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Quick Launch with default specifications

specifications - x13 - regarima - x11 (one less spec in default x13)

- Specification: created with `spec_x11_default()`, `spec_x13_default()`, `spec_regarima_default()`

spec_regarima_default(name = c("rg4", "rg0", "rg1", "rg2c", "rg3", "rg5c"))

spec_x13_default(name = c("rsa4", "rsa0", "rsa1", "rsa2c", "rsa3", "rsa5c"))

spec_x11_default()

Running SA estimation process

```
sa_13_v2<-RJDemetra::x13(y_raw, spec ="RSA5c")
```

#v3 #sa_x13 <- x13(y_raw, spec= “RSA5”, context = NULL)
sa_x13_v3 <- rjd3x13::x13(y_raw, spec= “RSA5”)

Output structure v2

show the list of lists do a new version

Output structure v3 (cf txt file)

show the NEW list of lists

highlight deifferences: - specs - specs direct accessible + 2 concepts (spec in v12 was point spec;, more about this in refresh section)

Retrieve output series

- final intermediate computations
- from preadjustement

highlight differences v2 vs v3

Retrieve Diagnostics

Plots and data visualisation

in v2 in v3 : .mostly in ggdemetra3 for now ..

Customizing specifications

v2: - step 1: extract spec - step 2: use the spec function with user-defined arguments v3: - use direct set_ functions

For the preprocessing step (functions defined in `rjd3modelling`):

`set_arima()`, `set_automodel()`, `set_basic()`, `set_easter()`, `set_estimate()`, `set_outlier()`, `set_tradingdays()`, `set_transform()`, `add_outlier()` and `remove_outlier()`, `add_ramp()` and `remove_ramp()`‘


`add_usrdefvar()` not yet available

For the decopmostion step (function defined in `rjd3x13`): `set_x11()`

Adding Benchamarking (like in GUI) (in ?)

Example of customizing specif

sp = spec_x13_default("rg5c") y = rjd3toolkit::ABS$X0.2.09.10.M fast.x13(y, spec = sp) sp = rjd3modelling::add_outlier(sp, type = c("AO"), c("2015-01-01", "2010-01-01")) sp = rjd3modelling::set_transform(rjd3modelling::set_tradingdays(rjd3modelling::set_easter(sp, enabled = FALSE), option = "workingdays"), fun = "None") sp = set_x11(sp, henderson.filter = 13) fast.x13(y, spec = sp)

Adding a context

new in v3, relevant ?

Customizing calendar regressors

in v2 in v3

Intervention variables

in v2

in v3 : still a bug

User-defined parameters: summary

BILAN - what's new ? - whats's missing ?

Refreshing data

new feature of v3

- new handling of spec (no extraction needed)
- notion of point spec and domain spec
- in v2 could only retrieve point spec
- generatingn new spec for refesh
- new estimation

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rjd3tramoseats package

here (optionnal) what is different from the way rjd3x13 operates

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SA of High-Frequency data

tool oriented

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calendars

here new functionnality of v3, rjd3modelling pacakage

outliers and intervention variables

(using this variables already presented, now focus on generation)

intervention bug in rj3modelling ?

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Conclusion on SA in R

What has v3 brought to the table ?