

Seasonal Adjustment Interface DEMETRA for Tramo/Seats and X-12-Arima (Release Version 1.4)



Training Course

- Case Studies -

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Demetra

**by Eurostat,
the Statistical Office of the
European Communities**

Based on:

Tramo (Mar 1999), Seats (May 1998)

by Víctor Gómez

and Agustín Maravall

X-12-Arima (Release Version 0.2.5)

by the US Bureau of Census



Exercise 1

- Run the DEMETRA application
- Create a new project (automated module)
- Input all time series from the Excel file "..\Demetra\data\Example_Vertical.xls"

- Use for the adjustment statistical tool 3 ("new automatic adjustment") and the SA-methods TRAMO/SEATS, all other parameters are used with their default values
- Process the adjustment

- Save the project to a Demetra project file
- Close the project
- Close the DEMETRA application

Your notes:



Exercise 2

- Run the DEMETRA application
- Open your project (as saved in exercise 1)

- Select the difficult time series "AT Original Series" in the table "Status of the Project" and invoke the function for the treatment of difficult time series
- Perform a new customised modelling: force the trading day adjustment with 6 regressors and length-of-period adjustment (no pretest); Process the adjustment with the new second model
- Check the results (Information on Models and Diagnostics); Accept the model that passes all diagnostic tests

- Select the difficult time series "IT Original Series" in the table "Status of the Project" and invoke the function for the treatment of difficult time series
- Perform a new customised modelling: force the trading day adjustment with 6 regressors and length-of-period adjustment (no pretest); Process the adjustment with the new second model
- Check the results (Information on Models and Diagnostics)
- Perform a new customised modelling: force the trading day adjustment with 6 regressors and length-of-period adjustment (no pretest), use the Italian holiday set; Process the adjustment with the new third model
- Check the results (Information on Models and Diagnostics); Accept the model that passes all diagnostic tests

- Save the project to the same Demetra project file

- Export the table "Status of the Project" to a text file
- Open in Excel, check and close this text file

- Close the project
- Close the DEMETRA application

Your notes:



Exercise 3

- Run the EXCEL application
- Open the EXCEL file "..\Demetra\data\Example_Vertical.xls"
- Set cell "A1" of all Demetra result sheets ("Demetra_Results (..)") to the value -2
- Save and close the Excel file

- Run the DEMETRA application
- Open your project (as saved in exercise 2)
- Use for the adjustment statistical tool 1 ("using previous settings"), all other parameters are used with their default values
- Process the adjustment
- Save the project to the same Demetra project file
- Close the project

- Open the EXCEL file "..\Demetra\data\Example_Vertical.xls"
- Check the newly written results
- Close the EXCEL application

- Close the DEMETRA application

Your notes:



Exercise 4

- Run the DEMETRA application
- Create a new project (detailed analysis module)
- For the input, select only the series "AT Original Series" from the Excel file "Example_Vertical.xls"
- Process the adjustment for model 1
- Create new automatic model with X-12-ARIMA
- Enter in panels for the modelling settings: set log-transformation (no pretest), no mean correction, force the trading day adjustment with 6 regressors and length-of-period adjustment (no pretest), new automatic model selection but estimate airline model
- Process the adjustment for model 2
- Check modelling tables with information on models and diagnostics
- Compare seasonally-adjusted and trend series of both models using the graphical comparison tool; Also view (separately) the ARIMA forecasts of TRAMO (beginning at JAN-1997) and of X-12-ARIMA
- View the log-files of both model processing
- Close the project

Your notes:



Exercise 5

- Perform exercises like exercise 1 to 4 with your own data sets

Your notes: