Gekko steering committee meeting, September 4, 2023, 15-17, at Statistics Denmark[1]

Proposed agenda

Part 1

1. Welcome + choice of minute taker + approval of last year's minutes.
2. Editor's report regarding 2022-23.
3. Status regarding Gekko 2.4 and 3.0
4. Feedback regarding Gekko 2.4 and 3.0
5. Prioritization of main lines regarding 2023-24
6. Organization and choice of editor for the next period
7. Date of the next meeting + any other business

Part 2

8. Commentaries regarding detailed checklist + prioritization of this
9. Other potential users
10. Status regarding documentation, help systems, etc.

[1] Links: Gekko main webpage: www.t-t.dk/gekko, organization: www.t-t.dk/gekko/organization. Gekko on GitHub: https://github.com/thomsen67/GekkoTimeseries.

Re item 5. Main lines

(Note that ”Gekko version 2.4” generally means Gekko 2.5.2, whereas ”Gekko version 3.0” generally means Gekko 3.1.15).

1. More work on error messages?
2. Regarding the new DECOMP module: implement user feedback. Make it easier to unfold aggregated “cells” of contributions (a feature to show all disaggregated contributions would be nice, and perhaps the possibility to point-and-click a “cell” to unfold).
3. In order to use the new DECOMP module for GAMS models, a so-called “scalar model” has to be produced from GAMS. This is normally straightforward to do, and a function to do it easily from Gekko is made, but there is a technical issue with the MAKRO use of the GAMS option ‘holdFixed’. This needs to be investigated and streamlined.
4. Tracing of data in data revision programs. Try out the module and obtain user feedback. When mature, enable it as default.
5. DOC<browser> for html equation browsing for GAMS-type models (for instance MAKRO). It could perhaps be interesting to provide time-difference DECOMP tables as part of DOC<browser>?
6. Develop Gekcel (Gekko add-in for Excel) some more, distributing among all Gekko users the Central Bank VBA ”query” approach (The Quarterly National Accounts have some VBA modules, too).
7. Regarding better INTERPOLATE (lower frequency to higher frequency): implement a convenient interface for the R package tempdisagg? This package implements Denton, Chow-Lin and many others.
8. Seasonal adjustment. Get JDemetra+ up and running from inside Gekko. This will entail producing xml files for the JDmetra+ “cruncher”. The Quarterly National Accounts know how to do this and can help.
9. PRT<i> and PLOT<i> ought to be implemented, showing series indices (practical if the series have very different levels). Relatively easy.
10. For the MAKRO databank system, investigate the issue of missing values, and eliminate all <missing = ignore> options in the Gekko programs.
11. Modelling developments. Discuss the Gekko model blueprint among interested users. Also: more means than goals (interdependence between goals) via addition of a special discardable model block describing the interdependence. A prototype for doing this has been proposed. More goals than means (goals contribute partly to means).
12. Improved PLOT window? The buttons ought to look more like the DECOMP window, and being able to show the age dimension on the x axis would be nice. (A draft/proposal of this exists, inspired by RStudio).
13. Xlsx files as table templates for Gekko (see editor’s report from the 2022 meeting).
14. Introductory guides, examples collections, exercises, etc. Is more material needed?

Re item 8. More detailed check list

1. Improving the interface to StatBank Denmark (cf. for instance this old blueprint)? Interface to other online databases like for instance Jobindsats?
2. User-developed procedures/functions could possibly be hosted on Gekko's website, in the form of downloadable library packages (cf. the new LIBRARY command). An “authorized” official gekko.zip library package could be made available.
3. In the longer run, implementing dataframes in Gekko proper as a new variable type could be useful, also for handling Apache Arrow files and interfacing more easily with R and Python (the new DECOMP could use dataframes objects internally, too).
4. Better R/Python (or even Julia) integration, perhaps using Apache Arrow files for dataframes.
5. Showing Gekko options in a clickable tree structure with explanations? Because of some architecture changes in the Gekko source code, this would be easier to do now.
6. Think about migrating Gekko to .NET Core at some point (and migrate the main Gekko window to WPF, too). This ought to be considered in a timely fashion, before the existing .NET Framework is phased out.