The Logic Behind TrackMacro

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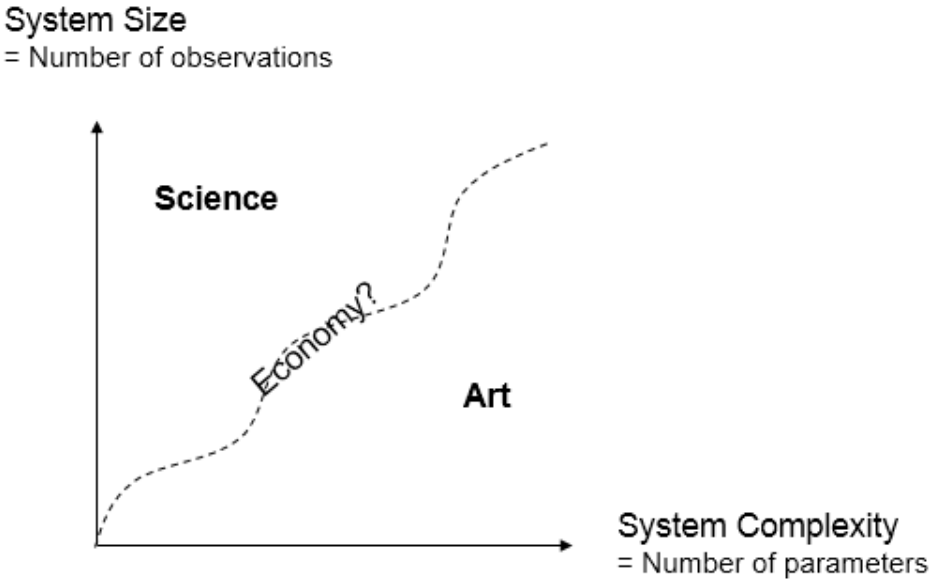
The purpose of the TrackMacro Research Program is to apply a systematic and constrained approach to macroeconomic rules developed over the years by Charles Gave. To this end only a handful of Charles's many rules have been selected for inclusion in the TrackMacro product. How so? Given that macro-economic analysis can be thought of both an art and a science; is it possible to apply scientific method to such a selection task?

To answer this question, consider the chart below which shows different aspects of human expression that can be covered by both science and art.

Fig1. The Expression of Human Knowledge Depends on the Size of the System Observed and on its Degrees of Freedom.



A work of art expresses the vast complexity of human knowledge and emotions in a limited number of representations. The most striking ones have one thing in common: they are unique.

A scientific judgment sits at the opposite end of the spectrum as it focuses on a limited number of parameters that can be applied to a vast number of observations.

The consequences for the TrackMacro Research Program are as follows:

- We selected rules that followed a macroeconomic logic and resulted from decades of experience, intuition, and observations.
- We drastically reduced the number of parameters to seven macro rules which ended up driving the whole system.
- We multiplied the number of observations by applying the exact same rules to all countries.
- We applied artificial intelligence to combine the rules efficiently in a non-linear manner. In particular, we used a proprietary genetic algorithm to simulate an artificial Darwinian process. This generated a vast population of combinations and selected the "best of breeds".
- We applied the optimization process to less than 10% of the observations, leaving more than 90% out of sample (37 countries out of 40).

The Research Program follows a simple logic. It translates the area of focus towards the upper left of the chart above (maximum number of out of-sample observations / minimum number of parameters), thereby increasing its scientific nature, as well as reducing its scope.