

The MB Crisis and the Great Recession

Glenn C.G. Magerman*

December 27, 2017

Abstract

The global crisis 2008-2009 has had a severe impact on many aggregate outcomes. The impact on US and EU GDP has been extensively documented (the Great Recession), along with the impact on international trade flows (the Great Trade Collapse), the sovereign debt crisis in the EU etc. Here, I propose file size of global trade data and the Great MB Crisis as additional aggregate information that tracks the global business cycle.

The global crisis 2008-2009 has had a severe impact on many aggregate outcomes. The impact on US and EU GDP has been extensively documented (the Great Recession), along with the impact on international trade flows (the Great Trade Collapse), the sovereign debt crisis in the EU etc.

Here, I propose file size of global trade data and the the Great MB Crisis as additional aggregate information that tracks the global business cycle. Figure 1 shows the evolution of the data size of international trade recorded yearly by the UN. In particular, each observation responds to the size in megabytes of the excel sheet downloaded from the UN COMTRADE database that contains the US\$ value of all country-pair trade flows in a given year. The data is highly disaggregated, at the exporter-importer-HS6 digit product level, providing micro evidence for macro outcomes of the business cycle. The figure also plots the evolution of world GDP over the same period, showing a clear comovement between world GDP and MB size.¹ Figure 2 shows the cross-correlogram for the two time series, indicating a strong and positive contemporaneous correlation between GDP growth and MB growth ($\rho = 0.7$), while lags and leads are much less correlated ($\rho = (0, \pm 0.2)$).

Without an underlying theoretical model, we cannot make any claims on causality. However, this empirical evidence suggests that there have been sizable adjustments at the extensive margins of trade, including entry and exit of product flows at the country-pair level. The idea is that the size of the data file increases as there are more entries in the excel sheet (the extensive margin), while changes in the value of flows (the intensive margin) do not affect this file size. This finding is in contrast to much of the existing literature on the Great Trade Collapse suggesting that most of the trade shock has been absorbed at the intensive margin (i.e. lowering trade values while keeping the trade relationship).

This research shows that underlying models of firm heterogeneity are constrained by taking into account changes in the extensive margin of trade.

*ECARES/ULB: glenn.magerman@ulb.ac.be

¹GDP data is collected from the World Bank ([here](#)). Trade data is collected from the UN Comtrade database ([here](#)).

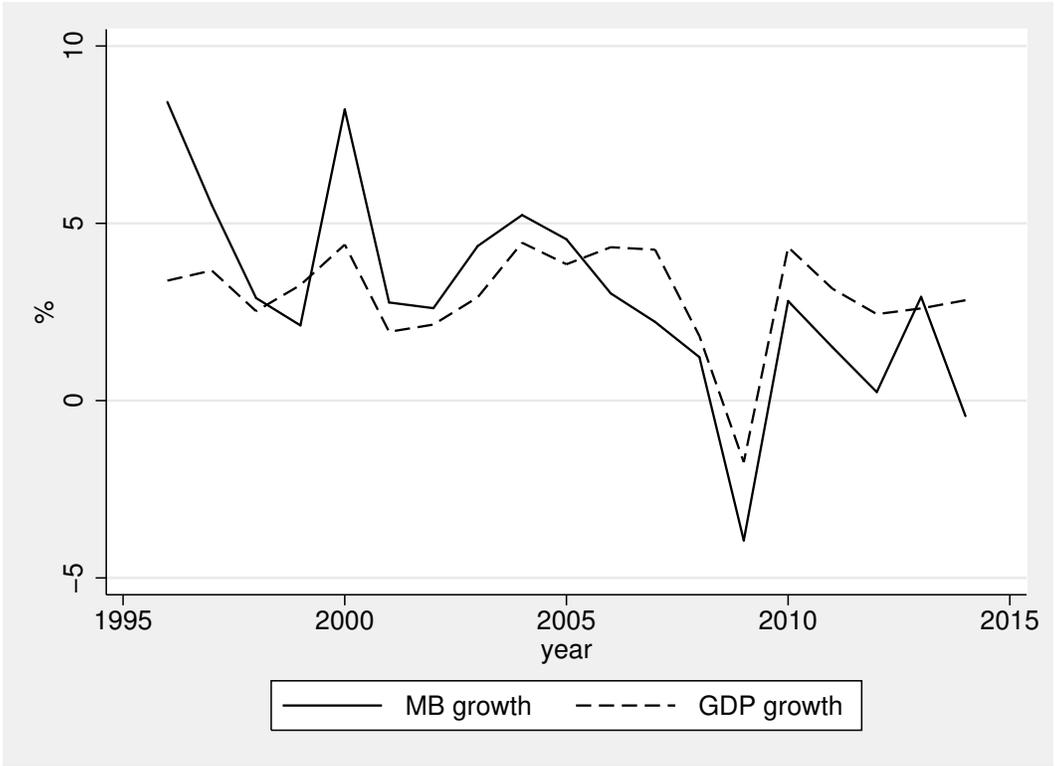


Figure 1: Evolution of world aggregates (1995-2014).
 Notes: MB is expressed in Megabytes. World GDP is expressed in constant 2010 US\$.

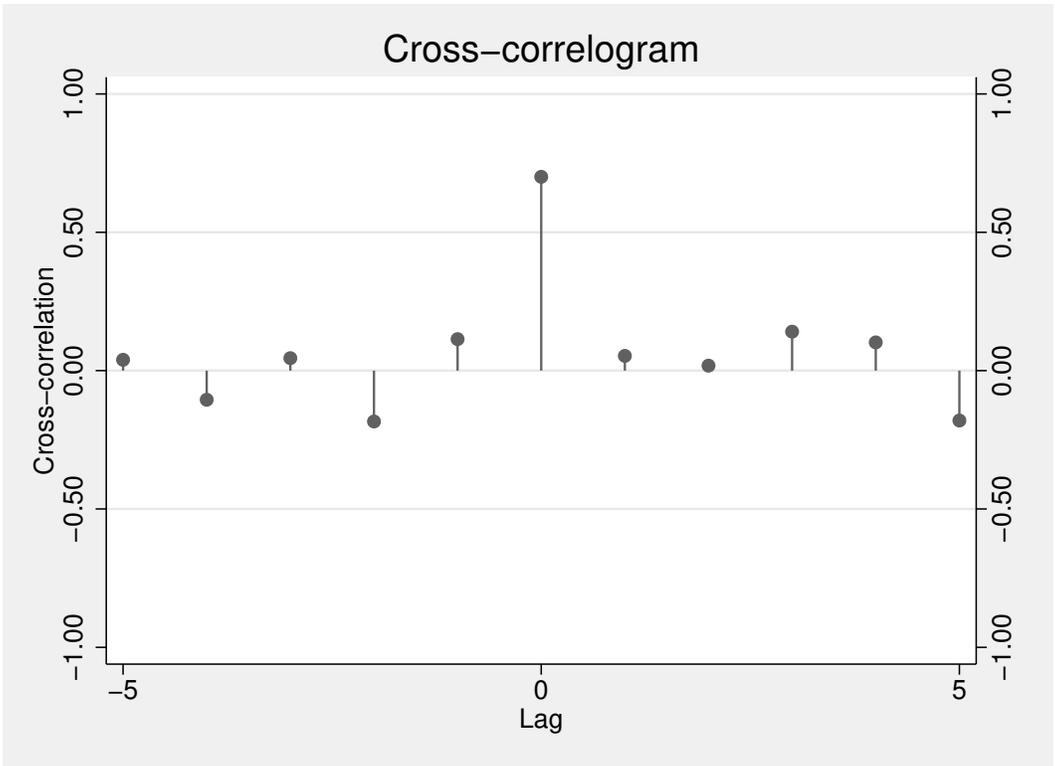


Figure 2: Cross-correlation MB and GDP growth.