Comment on:
Modeling the impact of the Global Financial Crisis on World Trade

Gordon Menzies

University of Technology, Sydney and Paul Woolley Centre for the study of Capital Market Dysfunctionality

Thanks for this opportunity to comment on this excellent paper. I want to outline what I see as the value of this work, then discuss some challenges modelers face as they attempt to replicate the GFC, before taking up two possible problems that are particular to this paper.

When we think about economic modeling, we can imagine a continuum. At one end there are simple models with analytic solutions (such as supply and demand in microeconomics). These models are unrealistic, but they are interpretable and good at gaining clear insights. At the other end are models that do everything they can to replicate reality. They do so at a cost of being 'black boxes' to some extent. My preferences over types of models mean that I am happier at either end of this continuum, rather than in the middle. DSGE models, which are too complex for analytic solutions and too simple to think they are realistic, are less comfortable for me, This paper, and the whole dynamic CGE model program, lie at the 'do everything you can to replicate reality' end.

The advantage of this kind of modeling is it forces coherence and quantification for any discussions about the 'big picture' for the world economy. This paper is very strong in this regard. I found the discussion of the effect on exports of the European fiscal expansion to be helpful. These expansions are large, and lead to a real appreciation and a crowding out of net exports via a standard Mundell-Fleming channel. Also, the outlook for interest rates has to take account of world events because the 'small country' assumption is not good enough, as McKibbin and Stoeckal make clear.

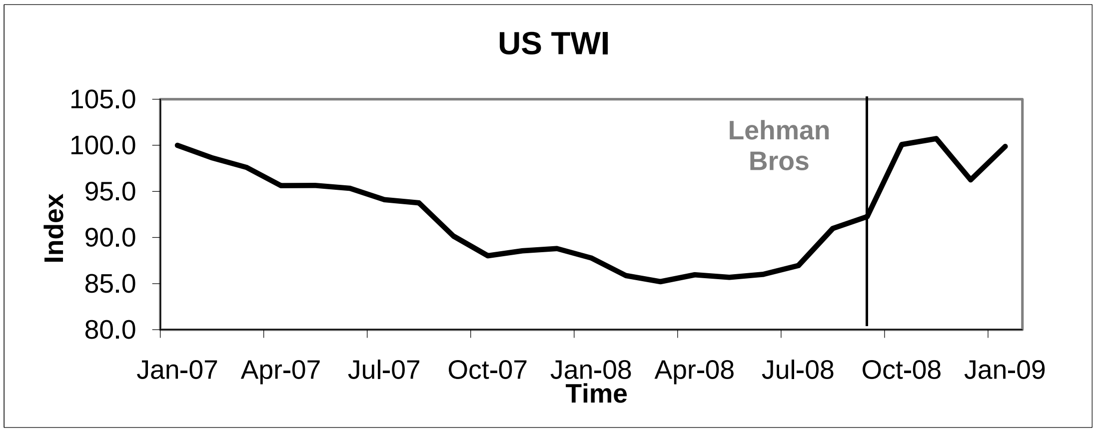
The other advantage of modeling is that one has to be clear about the causes of a crisis. Warwick has already clearly outlined this, so I shall not add anything.

The challenges for any modeler who uses dynamic CGE models to replicate the global financial crisis is that the institutions and financial details are really important, yet they are outside the purview of most models. Here, the key drivers are exogenous risk premia. There is always a challenge when imposing these exogenous factors. If they were estimated econometrically, one could claim that the data were driving them, to some extent. But when they have to be calibrated, there is always a fear of circularity – where what one considers 'reasonable' simulations drives the simulation results.

So much for the general criticisms: when we consider this paper in particular, there are a few issues that I want to raise.

First, what are we to make of the unlinking between exchange rates and the fundamentals during a crisis? Exchange rates are unruly at the best of times, but during crises they are probably even more

so. There is some credence to the view that during the GFC the $US became a 'safe haven' and the $A became anathema to currency traders (much to Australia's macroeconomic advantage).



I don't expect Stoeckal and McKibbin to have this effect in their model, but I do think that more discussion of exchange rates was warranted. In my own attempts to replicate the crisis, the exchange rate – being a key equilibrating variable – has sometimes displayed implausibly large movements.

I know replicating history is difficult – and the last few years represent an extraordinary challenge. However, I feel the paper could have done a bit more to match the simulations with history. It would be especially interesting to see if the qualitative moves in exchange rates mapped onto the models simulations.

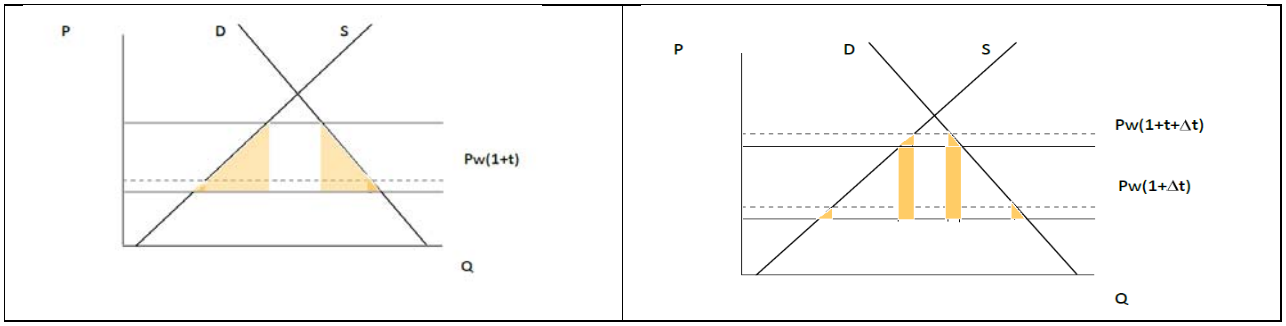
For years I have read papers that run empirical simulations and acknowledge the Lucas Critique, but then go on to say it is empirically unimportant. However, in the GFC we arguably do have an environment where the Lucas critique matters. As we speak, institutions and rules of thumb around the world are changing.

One way of interpreting the trade protection simulations in the paper is to think of them as a Lucas-type change in the preferences for protection as a result of the GFC. However, there are deeper issues here. If the authors deem the critique to be appropriate, then they should declare whether the baseline simulation should contain these altered parameters or not.

My final point relates to the trade simulations. The authors note that there have been calls for protection, and they investigate these with an increase in tariffs of 10 percentage points. However, the losses to the economy may not be linear in the tariff rate, so it would be interesting to see the losses for the world with more realistic increases in protection.

In the diagrams below, the deadweight loss to tariff increases are triangles with both sides proportional to the tariff rate. That being so, their sum is proportional to the square of the tariff rate. The economic intuition is given in the right panel. When tariffs are zero, any change in the rate has an effect on consumer and producer surplus, and no effect on revenue. However, when there is a non-zero tariff already in place, the changes to consumer and producer surplus occur as before, but the

changed trade volumes impact one for one on the change in government revenue, so the *change* in the deadweight loss is proportional to the tariff rate.



I do not know if a similar effect operates in their model, which has a richer story of the impact of protection. But if the loss to the economy of tariff rates is non-linear in the tariff rate, one simulation is not enough.

Indeed, the paper could be extended to answer the very interesting policy question of when protection becomes an important constraint on recovery from the GFC. A number of different simulations with different tariff rates could be compared to that end.

All in all, this paper provides an important aid to all of us as we seek to put together our 'gut feelings' about the recovery of the GFC. The emphasis on fiscal, monetary and trade policy is especially helpful in an environment where policy activism has, apparently, come back into fashion.