Trade-led Growth in Times of Crisis
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Session 3

Trade and Sectoral Impacts of the Financial Crisis: A Dynamic CGE Analysis

Anna Strutt & Terrie Walmsley

Waikato Management School
Te Raupapa

Asia Pacific Research and Training Network on Trade

www.artnetontrade.org

GTAP
Global Trade Analysis Project

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A Dynamic CGE Analysis

Anna Strutt and Terrie Walmsley

University of Waikato and Purdue University

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Introduction

- The Global Financial Crisis (GFC)
  - Led to a significant downturn in the global economy
  - Impacts felt throughout the world

- Recent signs that the worst may be over
  - But the global economy remains fragile with many uncertainties

- We explore the effects of the GFC using a dynamic global CGE model
  - Particular focus on trade and sectoral impacts

Overview

- Model and baseline

  – Data and calibration

  – Baseline projection

- Simulations

  – Calibration simulation

  – Three alternative scenarios representing different policy responses and severity of the crisis

- Tentative results

Model

- We use GDyn: a dynamic global CGE model

  - Maintains many features of the GTAP model

  - Also tracks foreign ownership of capital and investment behaviour, including errors in expectations

  - We can model consecutive periods of the crisis

  - We can also track the time path of adjustment for each country/region

- Modified for our purposes e.g.

  - Inclusion of unemployment

  - Incorporation of extensive historical data
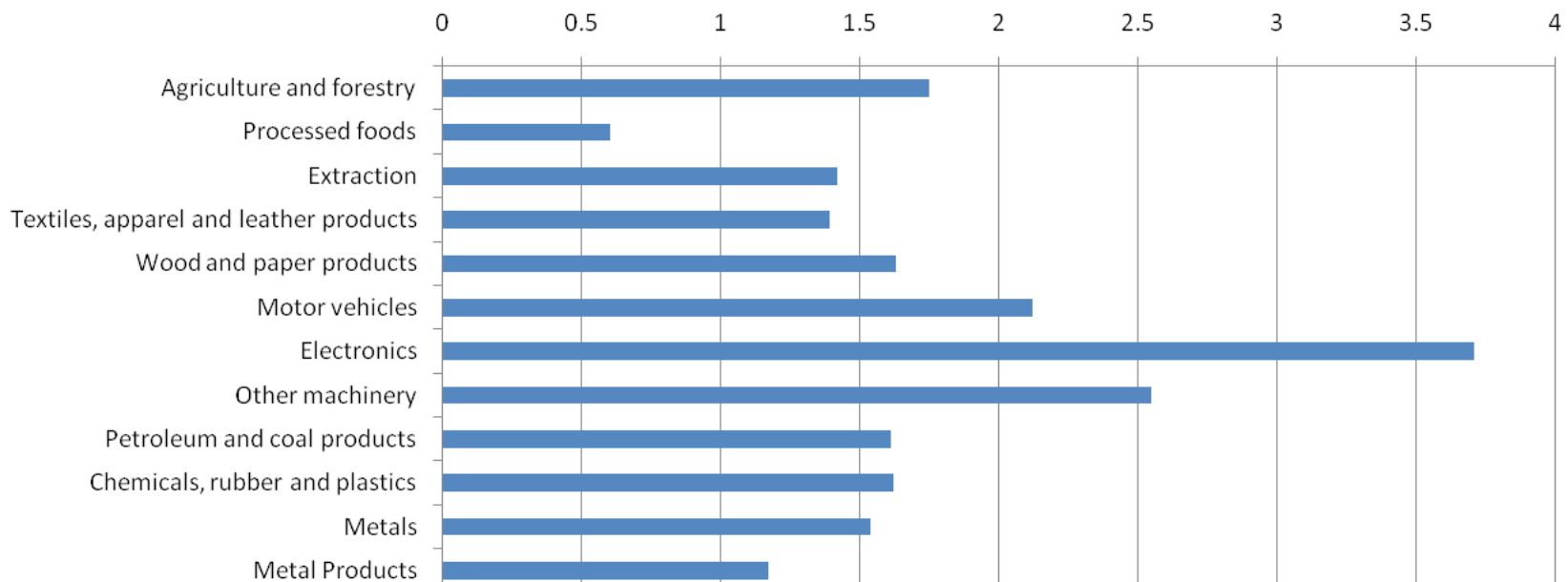
- First job is to get an appropriate baseline

Baseline

- Baseline represents how the global economy might look in the absence of the crisis

    - An important but very challenging task

- Previous approaches have focused on

    1. Projections for a few key macro variables (Walmsley 2006)

    2. A series of simulations covering historical, decomposition and forecasting (Dixon and Rimmer, single country models)

    - We use a combination of these approaches

Data sources

- GTAP/GDyn version 6 and version 7 databases
  - Benchmark year of 2001/2004
  - Aggregated to 27 sectors and 29 countries/regions

- Supplementary data collated
  - Extensive historical data
  - Macro projections of the GFC impact
  - Estimates of sectoral productivity growth

Estimated sectoral productivity growth differentials