Journal of Development Economics 111 (2014) 261–273

Contents lists available at ScienceDirect

Journal of Development Economics

journal homepage: www.elsevier.com/locate/devec

Emerging economies, trade policy, and macroeconomic shocks ☆

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ARTICLE INFO

Article history:
Received 2 January 2013
Received in revised form 25 April 2014
Accepted 1 May 2014
Available online 9 May 2014

Keywords:
Antidumping
Safeguards
Temporary trade barriers
Emerging economies
Tariffs
WTO
Business cycles
Exchange rates

ABSTRACT

This paper estimates the impact of aggregate fluctuations on the time-varying trade policies of thirteen major emerging economies over 1989–2010; by 2010, these WTO member countries collectively accounted for 21% of world merchandise imports and 22% of world GDP. We examine determinants of carefully constructed, bilateral measures of new import restrictions on products arising through the temporary trade barrier (TTB) policies of antidumping, safeguards, and countervailing duties. We find evidence of a counter-cyclical relationship between macroeconomic shocks and new TTB import restrictions as well as an important role for fluctuations in bilateral real exchange rates. Furthermore, the trade policy responsiveness coinciding with WTO establishment in 1995 suggests a significant change relative to the pre-WTO period; i.e., new import restrictions became more counter-cyclical and sensitive to real exchange rate shocks over time. Finally, we also present results that explicitly address changes to the institutional environment facing these emerging economies as they joined the WTO and adopted disciplines to restrain their application of other trade policies such as applied import tariffs.

1. Introduction

Why do countries sign trade agreements that restrict their use of import tariffs? A series of theoretical models dating back to Staiger and Tabellini (1987) and, more recently, Maggi and Rodriguez-Clare (1998, 2007), suggest that a trade agreement can serve as a commitment device for governments that seek to enact a more liberal trade regime but which are plagued by time-consistency problems. This theory is thought to be particularly relevant for many emerging economies, as these countries may not be sufficiently "large" in world markets so as to motivate the use of trade agreements for the standard terms-of-trade reasons (Bagwell and Staiger, 1999).[2]

Despite the strong theoretical predictions of the commitment literature, there is only limited empirical evidence on the explicit channels through which trade agreements facilitate different economic outcomes, let alone changes in policymaking behavior that might be associated with trade agreement commitments. Tang and Wei (2009) provide indirect support by using a difference-in-difference approach to examine how trade and other reform commitments impact GDP growth and the aggregate investment to GDP ratio. Their finding that countries required to undertake more serious trade reform efforts in order to join the WTO enjoyed better economic outcomes is consistent with evidence that the WTO can help the time-consistency problem in tariff setting. Similarly, Subramanian and Wei (2007) have identified certain channels through which active participation in the multilateral trading regime has promoted trade growth. Their results challenge earlier studies such as Rose (2004) which finds little increased trade growth associated with the GATT/WTO system on average across countries.

☆ Thanks to Robert Staiger, Douglas Irwin, Giovanni Maggi, Shang-Jin Wei, Aaditya Mattoo, Rachel McCulloch, Kyle Handley, Russell Hillberry, David Tarr, Daniel Dias, and the participants at the Tsinghua-Columbia Conference in Beijing, the EIIT Conference at UC-Santa Cruz, and seminars at Yale, Dartmouth, Michigan, Syracuse, Georgia Tech, FIU, the World Bank, and Chicago Fed for useful discussions. Aksel Erbahar, Carys Golesworthy, Chrissy Ostrowski, and Jake Fabina provided outstanding research assistance. Any opinions expressed in this paper are the authors' and should not be attributed to the World Bank, the Federal Reserve Bank of Chicago, or the Federal Reserve System. All remaining errors are our own.

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[2] Such countries may seek trade agreements for other reasons if, because they are "small" in world markets, they are not necessarily seeking partners against which to reciprocally neutralize the price impact of tariff cuts and coordinate policy changes so as to move jointly from the terms-of-trade driven prisoner's dilemma outcome.

http://dx.doi.org/10.1016/j.jdeveco.2014.05.001
0304-3878/

The purpose of this paper is to empirically investigate how a number of major emerging economies conducted their trade policy over 1989–2010 and, in particular, how the conduct of their trade policy *changed* by taking on commitments when joining the WTO in 1995. First, as we describe in further detail below, these economies exhibit variation in trade policy commitments across at least two important dimensions — (1) there is considerable cross-country variation in the share of products with any maximum tariff rate commitment, and (2) there is substantial cross-country variation in the simple average tariff rate over all products with any established maximum binding rate. Second, we describe how these economies have partially unwound their tariff commitments by resorting to a set of potentially WTO-consistent policies that permit the imposition of "temporary" trade barriers if specific economic and legal criteria are met. Our results paint a complex picture of the nature of trade policy commitments that emerging economies have taken on during this period under the WTO. On one hand, the use of temporary trade barrier policies of antidumping, safeguards, and countervailing duties may signal evidence of these countries' commitment to the WTO's principles of transparency and stability in trade policy determination. On the other hand, the increasing use of such import restrictions may also signal a step back from the more fully liberal regime that they promised to employ by lowering and binding their more general applied most-favored-nation (MFN) import tariffs.

Our particular approach is to examine the responsiveness of time-varying import protection to macroeconomic shocks for thirteen major emerging economies covering 1989–2010. We specifically investigate the imposition of new import protection through temporary trade barriers (TTBs) by constructing measures of import protection built up from disaggregated, product-level data. The emerging economies in our analysis are increasingly important contributors to the global economy; cumulatively by 2010, they combined to account for 21% of world merchandise imports and 22% of world GDP.[3] Furthermore, the economic *relevance* of emerging economies' application of TTBs in particular is increasingly apparent. Bown (2012a) documents that for the major Group of 20 (G20) emerging economies, the collective share of import products subject to TTB import restrictions increased more than 50% between 2007 and 2010 alone.[4] Finally, Bown (2011) finds that many of the G20 emerging economies also in our sample – including Argentina, Brazil, China, India, Indonesia, Mexico, South Africa, and Turkey – have used TTBs over 1990–2009 in ways that rival the intensity (product coverage) and frequency (number of policies imposed and removed) of high income economies like the United States and European Union.[5]

We begin our econometric investigation by documenting a general counter-cyclical relationship between macroeconomic growth and import protection for the period covering the inception of the WTO in 1995 through 2010. For these emerging economies, a decrease in domestic real GDP growth or an increase in the domestic unemployment rate leads to significantly more imported products subject to TTBs in the subsequent year. Furthermore, real appreciation of the bilateral exchange rate relative to a trading partner is also associated with subsequently more import restrictions, as is weak foreign GDP growth in a trading partner. The relationships for these emerging economies during this particular period are similar to those found in a sample of five high-income economies over the longer period of 1989–2010 (Bown and Crowley, 2013a).[6] Nevertheless, these new results are particularly important in light of recent evidence from Rose (2013), which examines a number of other trade policy instruments (and a longer time series of data) and concludes that there has been a secular decline in the sensitivity of import protection across countries.[7] Rose's paper concludes that protectionism is no longer counter-cyclical; however, it does not specifically address the manner by which countries have engaged in inter-temporal substitution of trade policy away from applied import tariffs and toward instruments such as temporary trade barriers.

The second half of our empirical analysis explicitly addresses the potential for trade policy substitution over time across instruments, and it also examines the role played by tariff commitments under the WTO beginning in 1995. Our formal approach is to extend our data sample back to 1989 and to compare how these emerging economies conducted their trade policies under both the GATT (pre-1995) and WTO (1995 onwards) regimes. We provide evidence that the increased responsiveness of TTBs to macroeconomic fluctuations after 1995 represents a significant departure from how the major emerging economies used these trade policy instruments before 1995, suggesting an institutional impact of the WTO. These results are robust to controlling for inter-temporal changes to WTO discipline over a country's other trade policies, such as its applied MFN tariffs.

In particular, we find that emerging economies implement TTB import protection during periods when a greater number of their imported products have become subject to the WTO disciplines that constrain a country's ability to raise applied MFN tariff rates.[8] Our empirical approach directly addresses the issue that emerging economy aggregate-level *demand* for TTBs might vary across countries and over time due to variation in the stringency of WTO discipline over their other trade policies. As we further describe below, this arises due to two important institutional differences between how high-income and emerging economies conducted their trade policy during this period. First consider applied import tariff levels. For any given year, most of the emerging economies in our sample had applied import tariffs that made them much less open to trade relative to high income economies — e.g., those studied in Bown and Crowley (2013a). Furthermore, many of these emerging economies also had lower applied tariffs in 2010 than at the beginning of the period. Second, emerging economies differ from high income countries in that most retained some freedom to make WTO-consistent *increases* to their applied MFN import tariffs. Our approach specifically controls for the time variation within and across

[3] As we explain in more detail below, our sample only includes major users of these TTB policies of import protection. Our econometric approach exploits country-level fixed effects which themselves would capture non-use by the countries omitted from our analysis if included.

[4] See Bown (2012a, Table A1a) which updates the data originally presented as Table 3 of Bown (2011) through 2011. Note that Mexico, Russia and Saudi Arabia are omitted from the G20 emerging economy sample for these statistics, though Mexico is included in the estimation sample described below.

[5] A major difference, of course, is that the US and EU have a much longer history of accepting external enforcement of their trade policy commitments through the multilateral institutions, more binding trade policy commitments, and an experience with TTBs that dates back to at least the 1960s. The extensive research literature examining determinants of TTBs by high income economies is surveyed by Blonigen and Prusa (2003).

[6] Bown and Crowley (2013a) examines data from the United States, European Union, Australia, Canada, and South Korea and is most closely related to a prior literature examining antidumping use by the United States and a handful of other high income countries on data from the 1980s and 1990s, including Knetter and Prusa (2003) and Feinberg (1989). One substantial difference is that while the current paper relies on the best available data across countries at the annual frequency, Bown and Crowley (2013a) was able to access data for high-income economies at the quarterly frequency. Another related paper is Crowley (2011), which is the first that we are aware of that highlights the channel of policy-imposing economies using country-specific bilateral import restrictions against trading partners that were experiencing negative growth shocks at home. Bown (2008) presents an approach that considers macroeconomic and industry-level determinants of antidumping for a number of the emerging economies in our sample for the period 1995–2002.

[7] The evolving literature on import protection taking place during the Great Recession also includes Bussiere et al. (2010), Kee et al. (2013), Gawande et al. (2014), and Davis and Pelc (2012), in addition to Bown (2011).

[8] This cross-country evidence on the substitutability between applied MFN tariffs and use of TTBs is consistent with the micro-level results for India provided in Bown and Tovar (2011). That approach estimates a Grossman and Helpman (1994) model at the product level on repeated cross sections of data over 1990–2002 and concludes that many of India's cuts to its applied import tariffs resulting from its unilateral liberalization of the 1990s were subsequently unwound through the implementation of new TTBs such as antidumping and safeguards.