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Trade policy and industrial policy in China: What motivates public authorities to apply restrictions on exports?

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ABSTRACT

This paper investigates the motives behind China's fiscal policy targeting exports. It relies on detailed data at the product level over the period 2002–2012. We analyze two major export fiscal instruments: export tax and export VAT rebate. Our results suggest that while pursuing many objectives simultaneously, Chinese policy used the two instruments in a complementary way with the aim of achieving their industrial policy and strategic objectives. Some are officially stated objectives such as promoting technology or environmental protection, while others do not appear in official documents, such as subsidizing downstream sectors. We also observed that China managed these instruments dynamically to address temporary shocks, for example to temper rising food price or to support strategic sectors sensitive to price competitiveness in the middle of the financial crisis.

1. Introduction

Taxation of Chinese exports has received increasing attention in recent years as the Chinese government has made frequent large adjustments, either upwards or downwards, in the level of export taxes and export VAT rebates (Evenett, Fritz, & Jing, 2012).[1] In the period 2002–2012, 75% of products at the HS8-digit level underwent at least one change in their VAT refund rate. Export taxes have targeted fewer products than the export VAT rebate, but in 2012, export tax affected almost four times more HS8-digit product lines than in 2002. On June 22, 2010, for example, the Chinese Ministry of Finance and the State Administration of Taxation issued a circular revoking the export VAT refund for 406 items, including steel products, nonferrous metal products, pesticides, pharmaceutical and chemical products and plastic, rubber and glass products (Cai Shui (2010) No. 57). The same year, China announced a 15% to 25% increase in export tax on certain rare earth minerals, including neodymium and lanthanum chloride and on ferroalloy containing >10% rare earth elements (WTO, 2012). Both these adjustments unambiguously increased the export costs of the products targeted.

The official statements announcing the tax adjustments often contain justification for the policy change. They stress the desire to promote products with high added value or technological content and to reduce the export share of “undesirable industries”, in particular those that produce polluting goods or consume large amounts of energy and natural resources. From 2008 onwards, the

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[1] One particularity of the Chinese export VAT rebate system is that exporters do not necessarily receive a complete refund of the domestic VAT they paid on their inputs. The amount of the refund varies widely across commodities, from zero to the full refund of the typical 17% VAT rate. See Section 2.1.

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fiscal tools were adjusted in an attempt to mitigate the negative repercussions of the international crisis. Nevertheless, the theoretical literature also reveals that export restrictions can be motivated by other considerations, which may hurt China's trade partners, for instance the subsidization of downstream industries or the manipulation of terms of trade (Bouët & Laborde, 2011). The latter motive is all the more attractive as restrictions on exports apply to products for which China is a leading world exporter. Unlike other forms of Chinese public intervention including currency manipulation, multiple subsidies, and trade protection, fiscal measures targeting exports have been overlooked. While a few recent studies emphasize that export VAT rebates have significant repercussions on the country's export performance (Chandra & Long, 2013; Gourdon, Hering, Monjon, & Poncet, 2014)[2] little is known about the real motives behind the Chinese export tax system.

This paper is an empirical examination of the determinants of the adjustments in the export VAT rebate and export tax levels over the past decade. We used VAT rebate rates and export tax rates at the product level (HS 6-digit level) for the period 2002–2012 to investigate how they connect to proxies for official and unofficial intervention motives. This covers justifications given by the public authorities such as those related to the promotion of technology or protection of the environment, but also other unstated more strategic motives pertaining to terms of trade and promotion of some sectors.

Our work builds on the theoretical arguments justifying export taxation (Scholefield & Gaisford, 2007). Theoretically, there are different rationales behind duties on exports (Bonarriva, Koscielski, & Wilson, 2009; Costinot, Donaldson, Vogel, & Werning, 2013; Devarajan, Go, Schiff, & Suthiwart-Narueput, 1996; Scholefield & Gaisford, 2007).[3] Unilateral export tax may improve domestic welfare by raising the world price of a country's exports relative to its imports. This manipulation of terms of trade is possible if a country supplies a large share of the world market. Another justification is connected to food security. Public authorities can reduce the consumption price of a good by reorienting domestic supply towards the domestic market (Piermartini, 2004). This may be important when the commodity is an agricultural one and food security is at stake (Bouët & Laborde, 2011). This rationale was frequently used during the 2006–2008 food crisis to justify export taxes and other forms of export restrictions (WTO, 2008). In the same way, export tax can be used to encourage downstream industries. If the export restriction more specifically discourages exports of raw commodities, this is equivalent to an indirect subsidy to the industries that use these raw products. The domestic price of these products compared to the world price is indeed lowered. Export tax can also be used to stabilize domestic prices for producers of exports. Lastly, export tax policy is a means of redistributing income from domestic producers to domestic consumers and the public sector.

In this field, empirical work lags behind theoretical work. Empirical studies are relatively rare, partly because of the scarcity of data on fiscal measures. Most existing studies focus on political economy motives (Emran, 2005; McMillan, 2001). Emran (2005) highlighted the role of revenue extraction while McMillan (2001) found empirical evidence that a high export tax is applied when producers cannot easily escape taxation or retaliate against it and when politicians expect few negative repercussions due to a higher discount rate, low weight placed on producer surplus and low expected future world prices.

Our objective is more modest. We aim to empirically check the relevance of some "officially" stated objectives in the use of two export fiscal tools: export VAT rebate and export tax. To this end, we drew up a list of the objectives expressed in official documents to justify the changes in the rates of these tools,[4] but also in the theoretical literature. We examined how the priorities of the Chinese government have evolved over time by assessing the explanatory power of a given set of determinants for the export tax and export VAT rebate year by year since 2004. Our work is closest to that of Eisenbarth (2014) who analyzed whether China's export VAT rebates and export taxes were driven by environmental concerns in the period 2006–2009. While our results are consistent with her findings that VAT rebate rates were adjusted to discourage exports of water polluting and air polluting products, our work differs in two important dimensions: we do not only focus on environmental motives and we cover a much longer time period, from 2004 to 2012.

Our analysis of the structure of export taxation reveals clear support for sophisticated high-technology products, which is in line with the official objectives in the 11th Five-Year Plan (2006–2010). However, the financial crisis in 2008 led authorities to reinforce its support for a variety of industries in which China had a comparative advantage and for which price competitiveness matters, including low technology products such as textiles and ceramics. Our results suggest that the two fiscal tools were applied to curb the exports of water polluting sectors, while the export VAT rebate was also used to limit exports of air polluting products. Both fiscal measures were reinforced during the period of the 11th Five Year Plan. Our analysis also revealed that variations in export VAT rebates were consistent with the aim of reducing the risk of trade disputes and threats to food security, but the export tax also seems to be used to limit the cost of the application of antidumping measure by trade partners. The possible use of these fiscal tools to benefit upstream industries was also confirmed.

The remainder of the paper is organized as follows. The next section describes the Chinese export VAT rebate and export tax systems and details the changing explanations given by public authorities for the yearly adjustments of the rates. Section 3 presents the data and our empirical specification. Section 4 discusses the results. Section 5 concludes.

[2] Relying on firm level export data for the period 2004–2006, Chandra and Long (2013) found that a one percentage point increase in the VAT rebate rate was associated with a 13% increase in exports. Gourdon et al. (2014) exploited product level data on export volume over the period 2003–2012 and reported that a one percentage point increase in refunded VAT rate was associated with a 7% increase in export quantities. These authors estimated export gains from a one percentage point increase in the export tax to be 5%. For estimates using a worldwide sample, see Solleder (2013).

[3] Theoretically, incomplete export VAT rebates are the equivalent of export taxes and lead to fewer exports (Feldstein & Krugman, 1990).

[4] These objectives, such as the promotion of technological upgrading and the environmental protection, are targeted by China's trade policy, even if they also appear in more general government policy statements such as China's five year plans.