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Trade Creation, Political Sensitivity and Product Exclusions: the Political Economy of Agriculture Protection in China's FTAs

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Abstract

One of the most significant features in Free Trade Agreement (FTA) is that certain products are excluded from tariff concession. Why do some products get more protection in FTAs? In this paper, using the highly disaggregated product-level data in agricultural sector of China's FTAs, we examined and extended the hypothesis developed by Grossman and Helpman (1995), illustrating the products which are more likely to be excluded in FTAs. Our results suggest that, with the involvement of political costs to incumbent government, products which experience trade creation and have more political sensitivity are more likely to be excluded in FTAs. Moreover, we revealed that the Chinese government tend to achieve different goals through negotiation power, seeking more economic benefits from big-trading partners while giving more concession to small-trading partners.

Keywords: Political Economy; Free Trade Agreement; Exclusion; Political Sensitivity; Negotiation Power

JEL classification: D72; F13; F15

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Introduction

Since the beginning of the 21st century, multilateral trade negotiations have reached a temporary impasse under the World Trade Organization (WTO) rules. With the involvement of almost all countries in at least one of the preferential agreements, regional trade agreements (RTAs) have become increasingly prevalent. According to the data from WTO, 419 RTAs have been in force as of February 1st, 2016, and more than 200 RTAs are currently under negotiation. To better adapt to the rapidly changing global economic environment and to facilitate the domestic economic structural transformation, China has been accelerating and promoting the negotiations of RTAs as well. Until February 1st, 2016, 14 RTAs have been signed by China with other 22 countries/regions, and 8 free trade agreements (FTAs) are being negotiated.

USA-led Trans-Pacific Partnership Agreement (TPP) began to negotiate in 2010, and 12 countries have signed the agreement in 2016. Meanwhile, USA and Europe Union announced to launch the negotiations of Transatlantic Trade and Investment Partnership agreement (TTIP) in June 2013. They have conducted 14 rounds of talks until August 2016. TPP and TTIP, which accounting for about 60% of the global GDP and 64% of global trade flow, are the comprehensive mega-regional agreement which covering the high standard of trade, investment and service rules. They will have significant influence on the international trade rules, the Asia-Pacific economic integration process and China's International trade. In response to the possible trade containment from TPP and TTIP, participate in international trade rules-making actively and build a global RTAs network will be an important strategy for China.

Agricultural market access has always been the most important and difficult issue under RTAs' negotiation. Therefore, facing the global wave of forming RTAs, the policymakers are increasingly concern about how to facilitate the negotiation and protect the domestic sensitive industries effectively as well. Several products are excluded from tariff concession is one of the most important trade protection measures in FTA; also is the premise of existence for many RTAs. For instance, as Grossman & Helpman (1995; henceforth cited as GH95) mentioned that the North American Free Trade Agreement (NAFTA) would not exist without the exclusion of US sugar and citrus. Although many FTAs have set up different levels of exclusion, but there is a big difference of choosing exceptional products. So what is the selection mechanism of exceptional products? Is there a common feature? Understanding the logic and reason of choosing exceptional product is not only the foundation of policy improvement, is the premise to provide more effective protection on the domestic sensitive industry as well.

As the third largest economy of global agricultural trade, China's agricultural products trade increased from \$36.92 billion of 2002 to \$213.97 billion of 2015 after accession to the WTO. The average annual growth rate of 14.47% is significantly higher than 7.29% of the world's average level. The FTA's strategy of China will play a significant role on international trade order and international agricultural trade.

Based on endogenous trade policy theory, GH95 discussed the reason of some traded products would be excluded from tariff concession. They suggested that products which

experience trade creation and trade diversion¹ would lead to exclusions in FTAs because of the pressure from import-competing interests and average voters, respectively. Bilateral trade barriers will fell sharply after FTA coming into force, the organized import-competing industry which experience trade creation would lobby to the incumbent government for protection. Meanwhile, since the source of imports transfer from the efficient one to the inefficient one (trade diversion effect), the average voters may also put pressure on the incumbent government for protection. Nevertheless, trade creation and trade diversion show unequal weights in policy decision-making due to their different characteristics. Given the relative small community and concentrated production, it is easier for producers to overcome the “collective action” problem (Olson, 1965). By working on the same political goals, import-competing producers which experience trade creation are more active to form a special interest group to maximize joint welfare (GH95). On the contrary, with a relatively larger community, consumers which experience trade diversion would be more difficult in overcoming the “collective action” problem. Furthermore, the consumers tend to ignore the rising food price, especially for the high income level groups. Hence, we would expect that trade creation would put more pressure on the government than trade diversion does. As a result, the industries from trade creation are more likely to be excluded in FTAs.

Besides the traded products, non-traded products could also be excluded in FTAs. Generally, a highly politically sensitive product would be excluded from tariff concession in FTAs regardless of it is traded or not traded at all. It is the case especially for the agricultural sector. For China, the staple foods are the highly politically sensitive products. The primary objective of the government’s agricultural policies is to guarantee the food security. The Chinese government has consecutively published “No. 1 Central Document”² for the past 13 years as well, emphasizing the importance of food security. Consequently, the staple foods have gained more protection, which could be well illustrated with an example of rice. From 2001 to 2014, there was no trade between China-Iceland and China-Switzerland on rice (HS100610). Due to the limitation of temperature, humidity and other geographical factors, rice could not be cultivated in Iceland and Switzerland³. Meanwhile, the rules of origin (RoO), which determine the “economic nationality” of goods in FTAs, could fully prevent re-trade from other countries⁴. Considering these above mentioned facts, it is almost impossible for China to import rice from Iceland or Switzerland. However, Chinese government designated to exclude rice entirely from tariff concession in all FTAs (including China-Iceland FTA and China-Switzerland FTA) since rice is a highly politically sensitive product, consistent with the

¹ As Viner (1950) first proposed, when a FTA or customs union is formed, the tariffs, import-rate quotas and non-tariff barriers have been eliminated, which would create new trade flow between members, this is trade creation effect. However, after the establishment of the tariff agreements, the trade flow would divert from efficient partner to less efficient one, since the goods would be cheaper within a union, but higher than the rest of the world, this is trade diversion effect.

² “No. 1 Central Document” is decreed on the first day of each year by Central Committee of the Communist Party of China, issued normally reflects the importance of policies.

³ According to the FAO database, there was not production data for these two countries.

⁴ The RoO of rice (HS100610) was wholly obtained from the China-Iceland FTA and China-Switzerland FTA.

view of Sheng (2006) that “*trade protection rates reflecting both national strategic activism and different lobbying capacity of interest groups.*” Thus, we could expect that whether traded or not, politically sensitive products such as rice, wheat, cotton, sugar etc. are also more likely to be excluded in China’s FTAs.

To date, the endogenous trade policy has obtained great progress owing to the development of Hillman (1982), Mayer (1984), Magee, Brock, & Young (1989), Grossman & Helpman (1994; 1995). Nevertheless, these researchers all concentrated only on the traded final goods but ignored the non-traded goods. Recently, Acharya (2015) took the non-traded goods into account, suggested non-traded goods would affect the trade policy due to the demand for non-traded goods is substituted or complemented to the demand for traded goods, but without any empirical support. In order to further understand the endogenous trade policy, it is essential to test and extend the hypothesis of GH95 which demonstrated the exclusions of traded goods. To the best of our knowledge, the empirical work to examine the hypothesis of GH95 is yet quite limited. Using the industry-level data, Olarreaga & Sologá (1998) analysed the internal and external tariff deviations in Mercosur agreement for the first time. Their results showed that the industries experiencing trade creation tended to be excluded from internal trade. Subsequently, based on GH95’s theory and “Protect for Sale” econometric specification (Grossman & Helpman, 1994), Gawande, Sanguinetti, & Bohara (2005) also identified which industries were most likely to be excluded in Mercosur agreement. The results illustrated that the import-competing interests of Argentina and Brazil largely determined the probability of exclusion from tariffs and import authorizations. It is of note that these two papers were both based on the industry-level data, which might ignore the features of products. More recently, Damuri (2012) used rich disaggregated data including 15 agreements in Harmonized System (HS) six-digit to analyse the determinant of tariff exclusions, showing that the most favoured nation (MFN) tariffs, import, revealed comparative advantage (RCA) and trade balance were the main determinants of exclusions in FTAs. They also demonstrated that agricultural sector was more sensitive than other sectors. However, they did not examine the hypothesis of GH95 directly and the results might not be robust due to the fact that the unobserved industry-specific trends might be related to the pace of trade liberalization (Mai & Stoyanov, 2015).

In this paper, we aimed to use the highly disaggregated agricultural data in HS six-digit level of China’s 10 FTAs to develop and examine the GH95’s hypothesis, which are whether traded or not, the products which experience trade creation or have more political sensitivity are more likely to be excluded in China’s FTAs. The empirical results and robustness checks are all support for our finding.

Our paper differs from the existing literature in the following respects. First, in most papers, researchers used the data from democratic countries to examine the endogenous trade protection (Grossman & Helpman, 1994; Goldberg & Maggi, 1999; Gawande & Bandyopadhyay, 2000). Few scholars have expounded the endogenous trade protection of non-democratic countries, except Mitra, Thomakos, & Ulubasoglu (2002) who highlighted the transition economy of Turkey. However, we used the data set from China which is a typical non-democratic country and the second largest economy nowadays. The application of the data

from China could contribute to a better understanding on the formation mechanism of FTAs in non-democratic countries. Second, the “Protect for Sale” model developed by Grossman & Helpman (1994) was examined by applying the US food-processing industries data (Lopez, 2008; Lopez & Matschke, 2006) and US cross-sectional agricultural data (Gawande & Hoekman, 2006). However, few researchers have analysed the endogenous trade protection in agricultural sector of non-democratic countries. Thus, it is of great significance to use the highly disaggregated data from China’s agricultural sector, contributing to fill the gap of agricultural protection in the non-democratic countries. Third, we further extended the GH95’s hypothesis by revealing that politically sensitive products which are not traded at all could also be excluded in FTAs, which could provide empirical support for the theory of Acharya (2015).

This paper consists of 6 sections. We introduced the theoretical framework and hypotheses in section 2, while described the stylized facts of sensitive products in China’s FTAs in section 3. We displayed the econometric specification and data set in section 4, and showed the empirical findings in section 5. Lastly, we made conclusions in section 6.

Theoretical Framework and Hypotheses

Based the analytical framework of Grossman & Helpman (1994), GH95 considered a specific-factor model with a two-stage bargaining game in forming FTAs. At the first stage, the political competition among domestic interests would determine the government’s policy-making, and the incumbent government will consider the political contributions from lobby groups and social welfare to respond the political pressures. At the second stage, the international equilibrium would be determined by bargaining powers and threat points of each government which reflect the political and economic structure. The outcomes of these two stages are not independent and interacting into a sequential game. A FTA is viable only if it is favored by both governments.

GH95 provided insights into how the FTAs come to existence, recognizing that the net gain from potential losers and gainers due to trade creation and trade diversion would be the forces behind the decision of forming FTAs. They focused on two cases of protection, *enhanced protection* and *reduced protection*. For the *enhanced protection*, the importer would expand its import from trade partner and continue import from the rest of the world. In this case, the changes in importing country are the tariff revenue losing and some trade diversion from the rest of the world to the FTA partner. However, the domestic price does not change and the total import may remain. Hence, the producers and consumers may not oppose the FTA, unless due to the trade diversion the potential aggregate welfare loss is extremely large. In exporting country, the industries would gain the producer surplus from preferential access because of the high-tariff protection in importing country. Hence, the industries would lobby in favour of the FTA.

For the *reduced protection*, the importer would import only from FTA partner and cease import from the rest of the world. So the domestic price in importing country will fall and the total import would expand. In this case, the producers in importing country face the falling

price and suffer the lower protection. However, the average voters gain the consumer surplus since the falling of domestic price, and their welfare may loss since the source of import change from efficient one to inefficient one. The aggregate welfare effect of importing country depends on relative forces of trade creation and trade diversion. Hence, the import-competing producers oppose the FTA and the average voters would support the FTA. In exporting country, the exporters would gain little or nothing from the agreement and the producers would neither support nor oppose the FTA.

Overall, the industry experience trade creation, the welfare of import-competing producers would be loss, and the consumers would be benefit from the falling price. However, they have to face the welfare loss since the trade diversion. As we discussed above, since the different political costs induced by industries which experience trade creation and trade diversion, the import-competing producers are easily to lobby the incumbent government for protection and the consumers are hard to overcome the “collective action” problem, hence, import-competing industry would be more likely to be excluded from agreement.

The political contributions are quite common in democracy countries. The incumbent government would choose those policies which could maximize the social welfare and the political contributions from lobby groups for re-election. However, the invisible contributions or political connections from interest groups would influence the policy-making in non-democratic countries as well. The incumbent governments have to take domestic political pressures into account to stabilize their regimes, as the cases in China (Li *et al.*, 2008; Du & Girma, 2010; Steinberg & Shih, 2012). Based on these aspects, we came up with the first hypothesis:

H1: trade creation products are more likely to be excluded in China’s FTAs.

As we indicated above, GH95 only focused on the traded goods. However, based on the stylized facts in China’s FTAs, the non-traded products could be excluded as well, especially for those politically sensitive products¹. Food security is the vital base for political stability (Arezki, & Brückner, 2011; Demarest, 2015). The main objective of China’s agricultural policies, such as “No.1 Central Document” and “The National Food Safety Program for Medium and Long-Term”, is to emphasize the food security. Besides, the central government also require local governors to guarantee 95% grain self-sufficiency in their jurisdictions (Jiang, 2010a). Grain self-sufficiency, social stability and economic growth are essential elements to the officials for their promotion. As the important components of food security, the highly politically sensitive products, such as staple foods would be get more support and protection in all aspects, regardless of being traded or not. Thus, we promoted the second hypothesis:

¹ Among the 10 China’s FTAs used as the samples, there are 5718 non-traded tariff lines, accounting for 68.65% of the total lines. Within these non-trade tariff lines, 1965 lines (34.37%) are excluded from agreement. Based on the measure of national strategic products, 15.17% of non-traded tariff lines are political sensitivity, while 52.01% are political sensitivity which based on tariff sensitivity. The details of the data also can be seeing in section 4.

H2: politically sensitive products are more likely to be excluded in China's FTAs.

The Exceptional Arrangements of Agricultural Products in China's FTAs

From 2004 to 2015, China had signed 14 RTAs. Amongst them, the 10 FTAs included in this study do not present any pattern of tariff reduction across the sample period. To sum up, the average share of sensitive products which experience tariff reduction with 10-year or longer transition time or entirely exclusion in total tariff lines is 34.42%. More specifically, the average share of tariffs reduced to 0 immediately is 24.10%, while the average shares of tariffs with 2-5 year transition and 6-9 year transition are 38.99% and 2.49%, respectively. The average share of tariffs with 10-year or longer transition is 23.48%, while the average share of absolute exclusions is 10.94%.

The scopes of tariff reduction are quite different among these 10 FTAs (Figure 1). The sensitive tariff lines range from 52 in China-New Zealand FTA to 673 in China-South Korea FTA. Almost all of agricultural products are liberalized in China-New Zealand FTA and China-ASEAN FTA, representing 93.62% and 92.93%, respectively. However, the extent of liberalization is quite limited in China-Peru FTA, China-Switzerland FTA and China-South Korea FTA. Their shares of sensitive agricultural products are all more than 50%, which are 57.98%, 66.38% and 81.97%, respectively.

From the perspective of products, Figure 2 shows the average share of sensitive tariff lines in China's FTAs. As we can see, fish (HS03), animal, vegetable fats & oils (HS15), meat (HS02), vegetables & fruits (HS08), milling products (HS11) and vegetables & fruits products (HS20) are highly sensitive products in China.

However, due to the different numbers of tariff lines in each chapter, the aforementioned method which uses the ratio of selected items to total tariff lines in HS six-digit to calculate shares may be biased in comparison among different chapters. Taking cereals (HS10) as an example, cereals are highly sensitive in China for the reason of food security. Thus, the transition length of cereals in the China-ASEAN FTA is more than 10 years, and cereals are entirely excluded in the other 9 FTAs. However, there are only 16 tariff lines in chapter 10 in the HS six-digit, making the share as 1.95%, which is much less than that of fish (10.60%; HS03).

Therefore, we used the ratios of selected items to tariff lines in each chapter in the HS six-digit as the shares to show the sensitivity across chapters. As shown in Figure 3, milling products (HS11), animal, vegetable fats and oils (HS15), cotton (HS52), dairy products (HS04), wool (HS51), cereals (HS10) and sugar (HS17) are the most sensitive products in China when calculated using the new method. These results are in line with the facts in China, since most of these products are defined as national strategic products.

The emphasis of sensitive products across chapters is quite different in each FTA. We took 50% as the criterion, which means if the share of selected sensitive items in the chapter is more than 50%, they are treated as highly sensitive. As shown in Figure 4, there are different

shares for sensitive products among countries from different areas. For Asian countries, HS10, HS24 and HS51 are the most sensitive products in China-ASEAN FTA. HS02, HS10, HS11, HS15, HS17, HS19-HS21, HS33, HS43, HS51, HS52 and HS71 are stressed more in China-Pakistan FTA. Furthermore, except HS23, HS24, HS28 and HS41, the products in the rest of 31 chapters are highly sensitive in China-South Korea FTA.

For South American countries, the chapters of HS04, HS06, HS08, HS10, HS11, HS14-HS16, HS19-HS22, HS24, HS28, HS39 and HS51 are highly sensitive in the China-Chile FTA. HS02, HS04-HS06, HS08-HS17, HS19-HS22, HS33, HS39, HS43, HS51, HS52 and HS71 are focused more in China-Peru FTA. Meanwhile, HS03, HS04, HS10, HS41 and HS51 are underlined more in China-Costa Rica FTA.

While For Oceania countries, only the chapter of cereals (HS10) is highly sensitive in the China-New Zealand FTA, and HS04, HS10 and HS15 are highly sensitive in the China-Australia FTA.

For European countries, HS10, HS17 and HS51 are highly sensitive in the China-Iceland FTA. Moreover, except HS01, HS18, HS23, HS24, HS28, HS29, HS35, HS39, HS41 and HS52, the products in the rest 25 chapters are all highly sensitive in the China-Switzerland FTA.

Why are the choices of sensitive products so different between countries? Is there any pattern among these exclusions? To shed light on these questions, we concentrated on finding the empirical evidence in the following sections.

Econometric Specification and Data

Econometric Specification

We specified the equation for each product in estimation as follows:

$$tariff_exclusion_{ij} = c + \alpha Politically_sensitive_i + \beta Trade_creation_{ij} + \gamma \mathbf{x}_{ij} + \delta_i + \delta_j + \varepsilon_{ij} \quad (1)$$

Where i denotes the product and j denotes the FTA partner. $tariff_exclusion_{ij}$ is the binary variable representing exclusion (equals to 1) or inclusion (equals to 0). $Politically_sensitive_i$ is the binary variable representing whether product i is politically sensitive. $Trade_creation_{ij}$ denotes the trade creation effect of product i after the FTA coming into force. \mathbf{x}_{ij} is a vector of control variables. δ_i measures fixed effects across the HS section, while δ_j measures fixed effects across countries. ε_{ij} is the classically distributed error term.

Tariff exclusion: According to the article XXIV in General Agreement on Tariffs and Trade (GATT), RTAs must eliminate tariffs on “substantially all trade” within a “reasonable length of time” which should not be more than 10 years except in the exceptional case.

Meanwhile, following Shearer, Almeida, & Gutierrez (2009), we treated the tariff reduction with 10-year transition time (or longer) or being entirely excluded (applicable for MFN tariffs) as sensitive. Thus, if tariff reduction on product i of the FTA partner j is more than 10 years or entirely excluded, then $tariff_exclusion_{ij}$ equals to 1, otherwise equals to 0.

Politically sensitive: As we discussed above, food security is one of the main objectives of the policies in each year. We defined the politically sensitive dummy as 1 if the product is national strategic product, otherwise equals to 0. In this paper, we treated wheat (HS1001), maize (HS1005), rice (HS1006), soya beans (HS1201), animal, vegetable fats and oils (HS15), sugar (HS17) and cotton (HS5201-HS5203) as national strategic products. There are 76 tariff lines in HS six-digit. Except soya beans (HS1201), the rest products are all protected by Tariff Rate Quotas (TRQs).

Trade creation: We followed the method from Baldwin & Murray (1977) and Cline *et al.* (1978) to calculate the trade creation effect, which is $\ln(Trade_creation_{AB}) = \ln(M_{ABO} \times \xi_d \times (\Delta t / (1 + t_0)))$, where M_{ABO} is the original import amount of country A from country B before forming a FTA and ξ_d is the elasticity of import demand of country A, while Δt is the tariff difference before and after forming the FTA. It is worthy of note that the elasticity of import demand is a critical variable. Following Hong (2013)'s method of handling the elasticity, we took the elasticity value ranking from 2 to 20 for sensitivity analysis.

Whether to form a FTA is quite different from the decision of one side policy, as there are always at least two stages for FTA negotiation. In general, the first stage shows the outcome of the negotiation among government preference, domestic interests and social welfare. While in the second stage, the politics, economics and bargain power of the trading partners must be taken into account facing the international bargaining situation. Based on Bohara, Gawande, & Sanguinetti (2004) and Damuri (2012), we considered the bargain power, competitive advantage, intra-industry trade and the share of import from FTA partner (% of total import) as control variables.

Negotiation power: Negotiation is very important before forming a FTA. Generally, the country which possesses more negotiation power would try to seek more interests in the negotiation. Damuri (2012) found the evidence that countries with large domestic market tend to have higher bargaining power. As Jiang (2010b) mentioned, however, to achieve special diplomatic objectives, the Chinese government would choose to use its negotiation power limitedly sometimes at the expense of economic benefits. There are several explanations for this. First, when China joined the WTO in 2001, there were voices of 'China threat' from neighbours. In order to quell fears of 'China threat', the Chinese government had made a large concession on agriculture in the China-ASEAN FTA, although some scholars had worried that a large amount of imported tropical products would damage the benefits of farmers in South China (Yang & Chen, 2010). Second, even though China would gain market economy status (MES) automatically with 15-year transition time after joining the WTO based on the rules, it

is up to every other country to admit the status or not. It is worth mentioning that the granting of MES to China is required if other countries would like to form FTAs with China. Thus, the Chinese government would give large concessions to western countries in order to get their support, even though there are only limited trades between these countries and China, such as the cases of China-Iceland FTA and China-Switzerland FTA. Third, China has insisted its 'big country morality' for a long time, which means that the Chinese government would tend to give more and take less in FTAs, especially when negotiating with smaller trading partners (Jiang, 2010b). Here we used the ratio of log GDP of China to that of FTA partner to control the effects of negotiation power (Ludema & Mayda, 2013).

RCA: If one country has more competitive advantage of product i over its trading partner, it is more likely for this country to adopt opening policy for product i . In contrast, the country with less competitive advantage of product i would explore the way to protect product i in the FTA negotiation. We defined $RCA_{ij} = \left(\left(export_{ij} / \sum_i export_{ij} \right) / \left(export_{iw} / \sum_i export_{iw} \right) \right)$, as proposed by Balassa (1965), where $export_{ij}$ and $export_{iw}$ are exports of product i of country j and of the world, respectively.

Intra-industry trade: It is widely held that intra-industry trade is politically easier to be liberalized than inter-industry trade, since intra-industry trade entails low adjustment costs and less political pressure for protectionism (Marvel & Ray, 1987; Levy, 1997; Cadot, De Melo, & Olarreaga, 2004). Also, as Marvel & Ray (1987) mentioned, it is difficult for the import-competing sectors to seek the protection under intra-industry trade, because they have to take into account the interests of not only consumers which are related to import but also producers which are related to export. Recently, Manger (2014) argued that intra-industry trade is less likely to be excluded from tariff reduction in Japan and South Korea's preferential trade agreements (PTAs), because PTAs help the firms specialize their production. However, Gilligan (1997) argued that intra-industry trade would reduce the collective action problems, thus increasing the demand for protection. Kono (2009) and Kim (2010) also found that intra-industry trade could lead to higher protection in the case of electoral institutions privilege narrowing protectionist interests and discriminatory public procurement, respectively. To sum up, the effect of intra-industry trade on protection is uncertain. Here we measure intra-industry trade using the Grubel-Lloyd index which is defined as $1 - absolute((export - import) / (export + import))$.

Import ratio: Anderson (1980), Trefler (1993), Finger & Harrsion (1996) have proved that high import penetration would induce high protection. However, according to the model in GH95, Grossman and Helpman hold an opposite presumption that high import penetration would lead to low protection. In order to illustrate the connection between import penetration and protection, it is of interest to construct an index for import penetration using either production or consumption data. Nevertheless, as Ludema & Mayda (2013) mentioned, it is difficult to match the production or consumption data to the HS six-digit trade data. In this paper, we used the share of import from FTA partners as an alternative variable to control the

impact of import on domestic industries. We defined import ratio as the ratio of import from trade partner to total import of China*100.

Labour intensive products: The trade policies in the first decade of the 21st century were relatively conservative since the political objectives were to build the “harmonious society” and “scientific development” at that time. Before 2010, there were large amount of labours in China. It is generally believed that trade liberalization may cause the problem of unemployment if its process is too fast. However, after 2010, China may have entered into the Lewis Turning Point, as the wage has increased significantly (Cai, 2008). Under this challenge, the Chinese government may choose not to protect the labour-intensive industry any more. At the same time, the government may also prefer to open land-intensive sectors since the cultivated lands are limited in China. Based on these observations, we controlled the preference of the Chinese government in FTAs.

Intermediate products: Ruffin (1969) and Ray (1991) mentioned that consumer goods would be protected more than intermediate goods. Recently, Gawande&Bandyopadhyay (2000), Cadot *et al.* (2004) and Gawande,Krishna, & Olarreaga (2012) found the empirical evidence of different protection in the upstream and downstream of supply chain.

Trade balance of China: Damuri (2012) argued that products with positive trade balance of reporting country are expected to be more likely to obtain preferential treatment. Here, we defined trade balance of China as $(export - import) / (export + import)$.]

Data

Up to the December 31, 2015, China had signed 11 FTAs and 3 Economic and Partnership Arrangements (EPAs), covering more than 22 countries (regions). Since the agreement on trade in goods in the China-Singapore FTA is almost a part of the China-ASEAN FTA, and the agreements between mainland China and Hong Kong, Macau and Taiwan are more political than economic. Hence, we used 10 FTAs in the sample, namely, China-New Zealand FTA, China-ASEAN FTA, China-Iceland FTA, China-Australia FTA, China-Costa Rica FTA, China-Pakistan FTA, China-Chile FTA, China-Peru FTA, China-Switzerland FTA, and China-South Korea FTA. The data for empirical analysis were organized with the six-digit HS in 1996 using levels of disaggregation of 8210 agricultural goods.

Because of the wide range time for signing each FTA (from 2004 to 2015), there are 2 versions of HS, namely, HS 2007 and HS 2012. In order to integrate the data set, we used the conversion and correlation tables from the United Nations to transform different versions into HS 1996. Since the most disaggregated trade data from the UN Comtrade were in HS six-digit while the original data from legal text of FTA were organized in HS eight-digit level, we combined these two data sets. If the product of HS eight-digit has longer transition time or higher protection level, the corresponding product in HS six-digit is set as the longer or higher one. For example, the products of 010513, 010514 and 010515 in HS 2012 are corresponding to the products of 010519 in HS 1996. If the length of transition time for 010513, 010514 and

010515 in HS 2012 is 3 years, 5 years and 10 years, respectively, the length of transition time for 010519 in HS 1996 is set to 10 years.

In this paper, we used the Ministry of Agriculture of China (MOA)'s definition of agricultural products, including the products from HS01 to HS24, and several products in HS2801, HS2905, HS3301, HS3501-HS3505, HS3809, HS3823, HS3913, HS4101-4103, HS4301, HS5001-HS5003, HS5101-HS5103, HS5201-HS5203, HS5301-HS5305, and HS7101. The total tariff lines in each FTA are 821. All trade data were obtained from the UN Comtrade database and the tariffs data were obtained from the WTO database. The original treated data of HS eight-digit products were obtained from the legal text of each FTA, which came from the WTO RTA database. The source of GDP and other data is WITS.

To deal with the potential endogenous problem, all independent variables were obtained 1 year before the negotiation of each FTA. They are all predetermined variables and should be uncorrelated with the error term. For the heterogeneity across agreements and across products, we controlled the countries fixed effects and HS section fixed effects.

Table 1 provides the summary statistics of our data set.

Results and Discussion

Baseline Results

Table 2 shows the results of estimation of tariff exclusions based on equation (1). The countries dummy and HS section dummy were controlled for each specification using OLS. To deal with the possible endogeneity problem, all independent variables were lagged by 1 year. The first column contains estimates using the Baldwin & Murray (1977)'s method for products in trade creation, where the import demand elasticity is 2. The second column contains estimates using national strategic products dummy as the proxy of politically sensitive products. The third column presents the results for both products in trade creation and political sensitive products.

Overall, the results are strongly in line with the hypotheses: controlling the economic variables and political variables, the coefficients of trade creation and politically sensitive variables are all significantly positive. These results indicate that trade creation and politically sensitive products are more likely to be excluded in China's FTAs. The marginal effects of trade creation and political sensitivity in column (3) are 0.0141 and 0.1980, respectively. In other words, one percentage increment of standard deviation of trade creation and political sensitivity would drive the probability of exclusion to increase by 0.0141% and 0.1980%, respectively. The marginal effect of political sensitivity is larger than that of trade creation, indicating that the political factor is more important than economic in the determination of exclusions in China's FTAs.

Products experiencing trade creation are more likely to be excluded in China's FTAs, which is in line with GH95's hypothesis and Olarreaga & Soloaga (1998)'s result. Although

the Chinese government does not have the re-election pressure, they still have to respond to the pressure from different interests. China is the typical “fragmented authoritarian” regime and the interest groups have multiple access points to lobby decision-makers, leading to the participation of multiple bureaucracies in policy-making processes (Lieberthal & Oksenberg, 1988; Steinberg & Shih, 2012). As the representative of farmers’ interests, MOA, local government, National Development and Reforms Commission (NDRC) all prefer to protect the agricultural sector (Jiang, 2010b). Thus, they would put pressure on the policy makers to provide more protections to the import-competition industries of agricultural sector in FTAs. The result also indicates the empirical evidence of the relationship between import-competing group and government in China.

The politically sensitive industries would get more protection as well, no matter experiencing trade creation or trade diversion, which is in line with the facts of China. From 2004 to 2016 in “No.1 Central Document”, the Chinese government has emphasized food security several times. In 1996, “The White Paper of China’s Food Problems” officially mentioned the “red line” of 95% self-sufficiency; in 2008, “The National Food Safety Program for Medium and Long-Term” explicitly emphasized it again. The “No.1 Central Document” of 2014 mentioned that the strategy of food security is to ensure basic self-sufficiency of grain food and absolute safety of staple food. The national strategic products, like rice, wheat, cotton, sugar, and oil seed are highly sensitive to the Chinese government, and most of them are protected with Tariff Rate Quota (TRQ) and other NTBs.

Based on the result in column (3) of Table 2, in addition to trade creation and political sensitivity, GDP ratio, RCA of China, import ratio and intermediate products together significantly determine the products exclusions in the FTAs. The sign of GDP ratio, which represents the negotiation power, is significantly negative. This result suggests that the more negotiation power the Chinese government has, the more likely they would seek less economic benefits. As we discussed above, this result might be related to the diplomatic objective of the Chinese government. The sign of RCA of China is significantly negative as expected, indicating that competitive advantage industries need less protection in trade policies. The sign of import ratio is significantly positive as expected, meaning that the larger import penetration, the more protection they would achieve. The coefficient of intermediate product is significantly positive, indicating that the Chinese government is more likely to protect the middle stream sectors rather than downstream sectors. The results of other control variables (e.g. RCA of trade partner, intra-industry trade, trade balance of China and labour intensive) are insignificant as shown in column (3).

Robustness Checks

We have concluded that products experiencing trade creation and politically sensitivity are more likely to be excluded in China’s FTAs. In this section, we tested the robustness of this conclusion.

Our first set of robustness checks involves the proxy variables of trade creation and political sensitivity. We used the dummy variable to represent trade creation. According to Bohara *et al.* (2004) on the method of trade diversion, we defined the trade creation dummy as 1 if the import growth ratio of the 3-year average (2012-2014) to another 3-year average (2001-2003) is larger than 1, which was calculated by $\frac{(import_{2012} + import_{2013} + import_{2014})/3}{(import_{2001} + import_{2002} + import_{2003})/3} - 1$, otherwise as 0. While for political sensitivity, we used tariff (1 year before the FTA negotiation) as another proxy variable. High tariff of products would be more sensitive in China. After China joined the WTO in 2001, the average tariff of agricultural products is only 1/4 of the global average. If the tariff of product is still high, then we can say this product is highly sensitive. Here we defined the politically sensitive dummy as 1 if the tariff of product i is more than the mean value of total products¹, otherwise as 0. The robustness results were presented in column (1) of Table 3, where the coefficient of trade creation and political sensitivity are still significantly positive, conforming to the regression results above mentioned. The marginal effects of trade creation and political sensitivity are 0.0290 and 0.08827, respectively.

The second set of robustness checks is to estimate the subsample that excludes zero-tariff products. The major purpose of FTA negotiations is to bargain on the tariff reduction and other NTBs. Thus, for those zero MFN tariff products, it would be not necessary to bargain anymore. The results in column (2) and column (3) of Table 3 show that, after excluding the zero-tariff products, the coefficient of trade creation and political sensitivity are still significantly positive.

The third set of robustness checks is dividing the full sample into big-trading partners and small-trading partners. If the total trade value is lower than the mean value between China and its partners, we treated it as small-trading partners, otherwise as big-trading partners². The results in Table 3 from column (4) to (7) still fit in with the conclusion, where the coefficients of trade creation variables and politically sensitive variables are significantly positive. Although the coefficient of trade creation and political sensitivity in column (4) are not significant, they are still positive.

An interesting result is that the sign of GDP ratio (fourth set), which represent the negotiation power in FTAs, has opposite impact in different groups. As shown from column (4) to column (7), for the small-trading partners, the coefficient of GDP ratio is significantly negative. For the big-trading partners, however, the coefficient is significantly positive. These results are in line with the discussions aforementioned, which indicate that for some diplomatic objectives, such as to get support for getting MES automatically in 2016, the Chinese government would like to make a great concession to small-trading countries like Switzerland, Iceland etc. (Jiang, 2010b). However, for big-trading partners, the Chinese government would consider the negative impact after the FTAs go in force as well, and use its negotiation power

¹ The mean value of tariff in our sample is 15.55%.

² The small-trading partners are Switzerland, Iceland, Costa Rica and Pakistan. The big-trading partners are South Korea, ASEAN, Peru, Chile, Australia and New Zealand.

to seek more exclusion. In general, for small-trading partners, China is a politically-motivated government; for big-trading partners, China is a welfare-maximizing government.

The fifth set of robustness checks is to estimate the subsample by dividing the full sample into traded products and non-traded products. As we discussed above, for the trade goods, products experiencing trade creation would be excluded in FTAs. Meanwhile, politically sensitive products would be excluded in FTAs as well. For the non-traded goods, there would be not trade creation effect. However, politically sensitive products also would be excluded in FTAs. The results are highly in line with these hypotheses, as shown in table 4. After excluding the non-traded goods, trade creation variable and politically sensitive variable are significantly positive in column (1) and column (2). After excluding the traded goods, politically sensitive variables are significantly positive in column (3) and column (4).

As we mentioned before, for political or diplomatic objectives, some FTAs are more political than economic, particularly with small-trading partners. Thus, the marginal effect of political sensitivity in small-trading group would be much bigger than that in the big-trading group. The results in Table 5 confirm this hypothesis, although one is insignificant.

Conclusion

In this paper, we explored the reasons why there are so many products excluded in FTAs. Based on the theory of GH95, we assumed that products which experience trade creation are more likely to be excluded in FTAs. Meanwhile, we further developed our hypothesis that politically sensitive products, especially non-traded products, are more likely to be excluded in FTAs. Then we used highly disaggregated agricultural sector data of China's FTAs in HS six-digit to examine these hypotheses.

The main findings of our work lie in the following three aspects. First, based on the stylized facts of sensitive products, we found that milling products (HS11), animal, vegetable fats and oils (HS15), cotton (HS52), dairy products (HS04), wool (HS51), cereals (HS10) and sugar (HS17) are the most sensitive products in China. Meanwhile, the emphasis on sensitive products across chapters is quite different in each FTA.

Second, our empirical results showed that products which experience trade creation or which are politically sensitive are more likely to be excluded in FTAs. The results were robust by using other proxy variables and subsamples.

Third, we illustrated that product exclusions are significantly determined by negotiation power in China's FTAs. Overall, with objectives of diplomacy or showing the "big country morality", the Chinese government would give more concession to trading partners. Moreover, for the big-trading partners, the Chinese government would use its negotiation power to seek both political and economic objectives. For the small-trading partners, however, the Chinese government would use the negotiation power to seek more political objectives than economic objectives.

The market access in the agricultural sector is always the most challenging in multilateral and bilateral negotiation. It is of concern to policymakers how to use the protection measures of tariffs and other NTB efficiently. Based on our findings, lots of politically sensitive and non-traded products are exclusions in China's FTAs. As we argued that the possibility to import some politically sensitive products, like rice, from some trading partners is really low due to their limitations of temperature, humidity and other geographical factors and the protection from RoO in FTAs, making it unlikely to hammer those politically sensitive products in China when FTAs are in force. Consequently, we would suggest policy makers to liberalize these politically sensitive products to some extent, so that they could get more negotiation space for other traded products which really need more protection.

References

- Acharya, R. C.(2015). Trade Policy in Lobbying Equilibrium: With Non-Traded and Traded Final Goods and Intermediate Inputs. *Economics & Politics*, 27(2), 313-336.
- Anderson, K. (1980).The Political Market for Government Assistance to Australian Manufacturing Industries. *The Economic Record*, 56(153), 132-144.
- Arezki, R., &Brückner, M. (2011).Food Prices and Political Instability(IMF Working Paper No. 11/62). Washington, DC: International Monetary Fund.
- Balassa, B. (1965).Trade Liberalization and 'Revealed' Comparative Advantage. *The Manchester School of Economic and Social Studies*, (32), 99-123.
- Baldwin, R., &Murray, T. (1977).MFN Tariff Reductions and LDC Benefits under GSP.*The Economic Journal*, 87 (345), 30-46.
- Bohara, A. K., Gawande, K., &Sanguinetti, P. (2004).Trade Diversion and Declining Tariffs: Evidence from Mercosur. *Journal of International Economics*, 64(1), 65-88.
- Cadot, O., DeMelo, J.,&Olarreaga, M. (2004). Lobbying, Counter lobbying, and the Structure of Tariff Protection in Poor and Rich Countries. *The World Bank Economic Review*, 18, 345-366.
- Cai, F. (2008). *Lewis Turning Point: A Coming New Stage of China's Economic Development*. Beijing,China: Social Sciences Academic Press.
- Cline, W. R., Kawanabe, N., Kronsjo, T.,& Williams, T. (1978).*Trade Negotiations in the Tokyo Round: A Quantitative Assessment*. Washington, DC: The Brookings Institution.
- Damuri, Y. R. (2012).How Preferential are Preferential Trade Agreements? Analysis of Product Exclusions in PTAs(CTEI Working Papers, No.3). Genève: Centre for Trade and Economic Integration.
- Demarest, L. (2015).Food Price Rises and Political Instability: Problematizing a Complex Relationship. *European Journal of Development Research*, 27(5), 650-671.
- Du, J.,&Girma, S. (2010).Red Capitalists: Political Connections and Firm Performance in China. *Kyklos*, 63(4), 530-545.

- Finger, M. J., & Harrison, A. (1996). The MFA Paradox: More Protection and More Trade? In: Krueger, A. O. (Ed.), *The Political Economy of American Trade Policy* (Chapter 4, pp. 197-260). Chicago: University of Chicago Press.
- Gawande, K., & Bandyopadhyay, U. (2000). Is Protection for Sale? Evidence on the Grossman-Helpman Theory of Endogenous Protection. *The Review of Economics and Statistics*, 82(1), 139-152.
- Gawande, K., & Hoekman, B. (2006). Lobbying and Agricultural Trade Policy in the United States. *International Organization*, 60(3), 527-561.
- Gawande, K., Krishna, P., & Olarreaga, M. (2012). Lobbying Competition over Trade Policy. *International Economic Review*, 53(1), 115-132.
- Gawande, K., Sanguinetti, P., & Bohara, A. (2005). Exclusions for Sale: Evidence on the Grossman-Helpman Model of Free Trade Agreements (NAFTA-Mercosur Working Paper Series, No.4). New Mexico: University of New Mexico.
- Gilligan, M. J. (1997). Lobbying as a Private Good with Intra-Industry Trade. *International Studies Quarterly*, 41(3), 455-474.
- Goldberg, P. K., & Maggi, G. (1999). Protection for Sale: An Empirical Investigation. *American Economic Review*, 89(5), 1135-1155.
- Grossman, G. M., & Helpman, E. (1994). Protection for Sale. *American Economic Review*, 84(4), 833-850.
- Grossman, G. M., & Helpman, E. (1995). The Politics of Free-Trade Agreements. *American Economic Review*, 85(4), 667-690.
- Hillman, A. L. (1982). Declining Industries and Political-Support Protectionist Motives. *American Economic Review*, 72(5), 1180-1187.
- Hong, C. (2013). The Political Economy of Tariff Protection in China: Evidence from the WTO Accession. *The Canadian Journal of Economics*, 46(4), 1295-1316.
- Jiang, T. (2010a). WTO Accession and Food Security in China. In: Chen, C., & Ron, D. (Eds.), *Agriculture and Food Security in China: What Effect WTO Accession and Regional Trade Agreements?* (Chapter 7, pp. 183-202). Canberra, Australia: Asia Pacific Press.
- Jiang, Y. (2010b). China's Pursuit of Free Trade Agreements: Is China Exceptional? *Review of International Political Economy*, 17(2), 238-261.
- Kim, D. (2010). Intra-industry Trade and Protectionism: The Case of the Buy National Policy. *Public Choice*, 143(1/2), 49-65.
- Kono, D. (2009). Market Structure, Electoral Institutions, and Trade Policy. *International Studies Quarterly*, 53(4), 885-906.
- Levy, P. I. (1997). A Political-Economic Analysis of Free-Trade Agreements. *American Economic Review*, 87(4), 506-519.
- Li, H., Meng, L., Wang, Q., & Zhou, Li-An. (2008). Political Connections, Financing and Firm Performance: Evidence from Chinese Private Firms. *Journal of Development Economics*, 87(2), 283-299.
- Lieberthal, K., & Oksenberg, M. (1988). Policy making in China. Princeton, NJ: Princeton University Press.

- Lopez, R. A., & Matschke, X. (2006). Food Protection for Sale. *Review of International Economics*, 14 (3), 380-391.
- Lopez, R. A. (2008). Does 'Protection for Sale' Apply to the US Food Industries? *Journal of Agricultural Economics*, 59(1), 25-40.
- Ludema, R. D., & Mayda, A. M. (2013). Do Terms-of-Trade Effects Matter for Trade Agreements? Theory and Evidence from WTO Countries. *The Quarterly Journal of Economics*, 128(4), 1837-1893.
- Magee, S. P., Brock, W. A., & Young, L. (1989). *Black Hole Tariffs and Endogenous Policy Theory: Political Economy in General Equilibrium*. Cambridge, New York: Cambridge University Press.
- Mai, J., & Stoyanov, A. (2015). The Effect of the Canada-US Free Trade Agreement on Canadian Multilateral Trade Liberalization. *Canadian Journal of Economics*, 48(3), 1067-1098.
- Manger, M. S. (2014). The Economic Logic of Asian Preferential Trade Agreements: The Role of Intra-Industry Trade. *Journal of East Asian Studies*, 14(2), 151-184.
- Marvel, H. P., & Ray, E. J. (1987). Intraindustry Trade: Sources and Effects on Protection. *Journal of Political Economy*, 95(6), 1278-1290.
- Mitra, D., Thomakos, D. D., & Ulubasoglu, M. A. (2002). "Protection for Sale" in a Developing Country: Democracy vs. Dictatorship. *The Review of Economics and Statistics*, 84(3), 497-508.
- Olarreaga, M., & Soloaga, I. (1998). Endogenous Tariff Formation: The Case of Mercosur. *World Bank Economic Review*, 12(2), 297-320.
- Olson, M. (1965). *The Logic of Collective Action*. Cambridge, MA: Harvard University Press.
- Ray, E. J. (1991). Protection of Manufactures in the United States. In: Greenaway, D., Robert C. Hine, R. C., O'Brien A. P., & Thornton, R. J. (Eds), *Global Protectionism: Is the U.S. Playing on a Level Field?* (pp. 12-36). Macmillan, London: Palgrave Macmillan UK.
- Roy, J. R. (1969). Intermediate Goods, and Domestic Protection. *American Economic Review*, 59(3), 261-269.
- Shearer, M., Almeida J. S., & Gutierrez, C. M. (2009). The Treatment of Agriculture in Regional Trade Agreements in the Americas (Working Paper Series, No. IDB-WP-145). Washington, DC: Inter-American Development Bank.
- Sheng, B. (2006). Political Economy of China's Trade Policy: The Evidence from Industrial Protection in 1990s. *Frontiers of Economics in China*, 1(3), 406-432.
- Steinberg, D. A., & Shih, V. C. (2012). Interest Group Influence in Authoritarian States: The Political Determinants of Chinese Exchange Rate Policy. *Comparative Political Studies*, 45(11), 1405-1434.
- Trefler, D. (1993). Trade Liberalisation and the Theory of Endogenous Protection. *Journal of Political Economy*, 101(1), 138-160.
- Yang, J., & Chen, C. (2010). Agricultural Trade between China and ASEAN: Dynamics and Prospects. In: Chen, C., & Ron, D. (Eds.), *Agriculture and Food Security in China*:

What Effect WTO Accession and Regional Trade Agreements?(Chapter 12, pp. 346-371). Canberra, Australia: Asia Pacific Press.

Tables and Figures

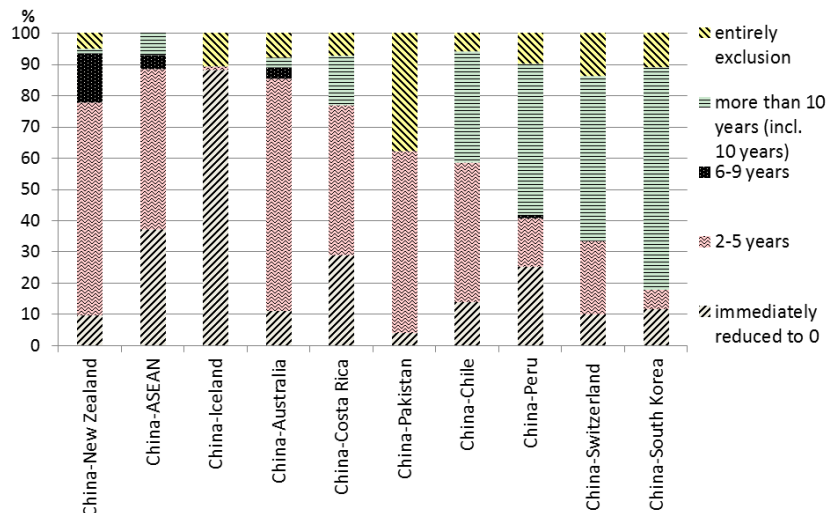


Figure 1: The average tariff reduction in China's FTAs

Notes: The data were extracted from the legal text of each FTA. To simplify tariff reductions in FTAs, we used the length of transition as the basic rule. The share is calculated as the ratio of selected items to total tariff lines in HS six-digit. The details of the data are in section 4.

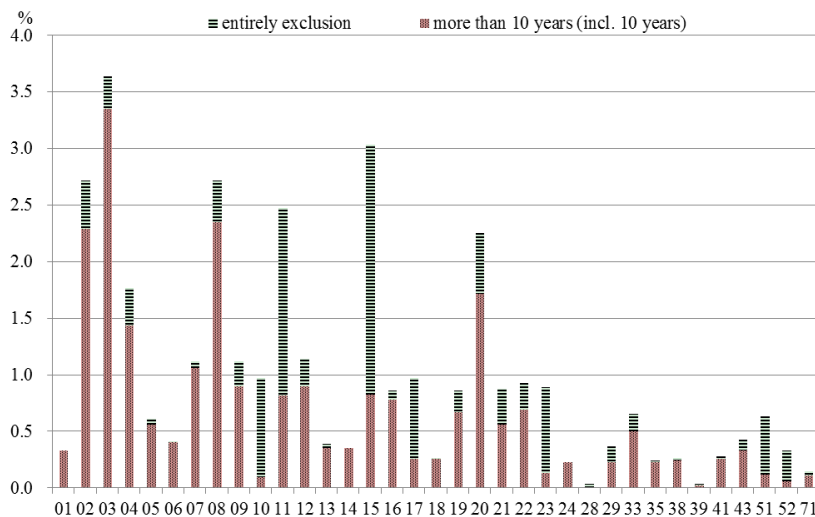


Figure 2: The HS section distribution of sensitive agricultural products in China's FTAs

Notes: The share was calculated as the ratio of selected items to total tariff lines in HS six-digit. HS28 to HS71 are parts of products in the section. For details see the data in the section 4.

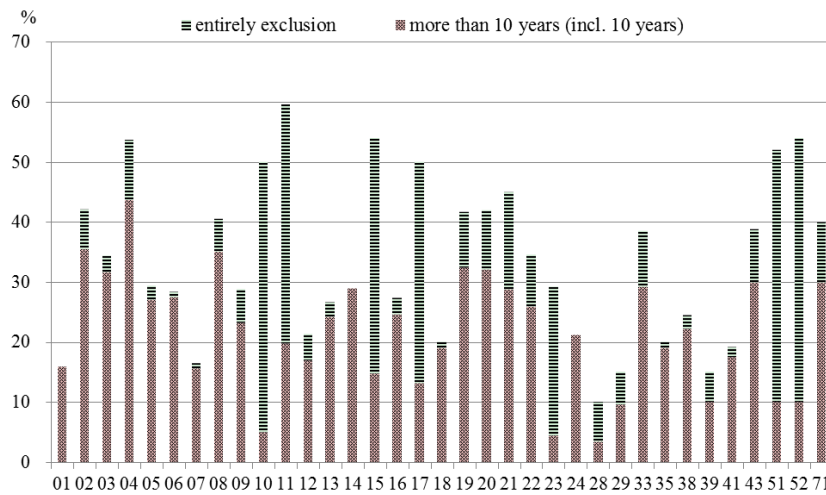


Figure 3: The HS chapter distribution of sensitive agricultural products in China's FTAs

Notes: The share was calculated as the ratio of the number of selected sensitive items to the number of tariff lines in each chapter in the HS six-digit. HS28 to HS71 are parts of products in the section. For details see the data in the section 4.



Figure 4: The shares of sensitive selective items in each FTA

Note: The share is calculated as the ratio of the number of selected sensitive items to the number of tariff lines in each chapter in the HS six-digit.

Table 1: The definition and statistics for variables in the regression

Variable	Obs	Mean	Std. Dev.	Min	Max	Definition
tariff_exclusion	8210	0.3437	0.4750	0	1	Including tariff reduction with 10-year or longer transition time or entirely exclusion. Dummy variable, Products excluded=1, otherwise=0
Intrade_creation_Baldwin_2	1881	1.2154	3.5204	-11.2451	13.1049	Measuring the trade creation effect following Baldwin et al. (1977) and Cline et al. (1978). The import demand elasticity is 2, taking 3, 8 and 20 for robustness check.
trade_creation	2101	0.4517	0.4978	0	1	Measuring the trade creation effect. Dummy variable equals to 1 if the import growth ratio from 2014 to 2001 (3 year average) is bigger than 1, otherwise equals to 0.
national_strategic_product	8210	0.0926	0.2898	0	1	Measuring the politically sensitive. Dummy variable equals to 1 if the product is national strategic product, otherwise equals to 0.
politically_sensitive	8210	0.3663	0.4818	0	1	Measuring the politically sensitive. Dummy variable equals to 1 if the tariff before FTA negotiation is bigger than average level, otherwise equals to 0.
gdp_ratio	8210	38.2494	46.6508	3.2732	135.4444	Measuring the negotiation power. Defy it as GDP of China/ GDP of trade partners.
rca_c	7650	0.7779	1.6430	0	16.4806	The product competitive advantage of China.
rca_p	7057	3.4488	25.2397	0	1097.6410	The product competitive advantages of trade partners.
gl_index	2492	0.0771	0.1948	0	0.9975	Measuring the intra-industry trade level. Calculating the Grubel-Lloyd index as $1 - \frac{\text{absolute}((\text{export} - \text{import})/(\text{import} + \text{export}))}{1}$.
import_ratio	7112	3.2197	13.9118	0	100	The ratio of import from trade partner to total import of China*100.
trade_balance	7650	0.1128	0.8202	-1	1	Trade balance of China, defy it as $(\text{export} - \text{import})/(\text{export} + \text{import})$.
intermediate_product	8210	0.5920	0.4915	0	1	Dummy variable equals to 1 if the product is the intermediate product, otherwise equals to 0.
labor_intensive_product	8210	0.9220	0.2681	0	1	Dummy variable equals to 1 if the product is the labour intensive product, otherwise equals to 0.

Source: Based on authors' calculation.

Table 2: Regression results for product exclusions

	(1)	(2)	(3)
Intrade_creation_Baldwin_2	0.117*** (0.0230)	-	0.118*** (0.0232)
national_strategic_product	-	3.698*** (0.858)	1.648* (0.938)
gdp_ratio	-0.206*** (0.0208)	-0.214*** (0.0143)	-0.209*** (0.0210)
rca_c	-0.112*** (0.0425)	-0.0583** (0.0248)	-0.109*** (0.0424)
rca_p	-0.000136 (0.00216)	0.00306* (0.00171)	-0.000156 (0.00217)
gl_index	0.0861 (0.247)	0.431** (0.195)	0.113 (0.249)
import_ratio	0.00555** (0.00242)	0.0105*** (0.00178)	0.00578** (0.00242)
trade_balance_c	0.129 (0.0919)	0.0578 (0.0653)	0.126 (0.0924)
labor_intensive_product	-0.285 (0.728)	-0.424 (0.840)	-0.0383 (0.753)
intermediate_product	0.887* (0.459)	0.524* (0.302)	0.893* (0.459)
Constant	0.805 (0.523)	1.359 (0.955)	0.559 (0.562)
Country dummies	yes	yes	yes
HS section dummies	yes	yes	yes
N	1429	2410	1429
pseudo R ²	0.639	0.535	0.642

Notes: Dependent variable is tariff exclusions (products excluded =1, otherwise=0); robust standard errors are in parentheses; for independent variables the data are all from one year before the negotiation of each FTA; following Hong (2013)'s research, we also used other import demand elasticity (3, 8, 20), and the results are almost the same; * p < 0.10, ** p < 0.05, *** p < 0.01.

Table 3: The robustness checks for product exclusions A

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Full sample	Without zero tariff	Without zero tariff	Small-trading partners	Big-trading partners	Small-trading partners	Big-trading partners
trade_creation_dummy	0.202* (0.105)	0.222** (0.107)	-	-	-	0.539* (0.302)	0.223* (0.117)
politically_sensitive	0.613*** (0.131)	0.571*** (0.132)	-	-	-	1.584*** (0.402)	0.442*** (0.138)
Intrade_creation_Baldwin_2	-		0.118*** (0.0232)	0.0512 (0.0630)	0.149*** (0.0250)	-	-
national_strategic_product	-		1.648* (0.938)	0.935 (1.031)	1.652* (0.943)	-	-
gdp_ratio	-0.218*** (0.0181)	-0.218*** (0.0182)	-0.209*** (0.0210)	- (0.00505)	0.348*** (0.0398)	-0.0786** (0.0357)	0.314*** (0.0338)
rca_c	-0.0609* (0.0345)	-0.0882** (0.0367)	-0.109*** (0.0424)	0.134 (0.136)	-0.195*** (0.0553)	0.0456 (0.116)	-0.122*** (0.0408)
rca_p	0.00215 (0.00209)	0.00231 (0.00215)	- (0.00217)	0.00247 (0.00237)	-0.00190 (0.00330)	0.00158 (0.00214)	0.00238 (0.00310)
gl_index	0.380* (0.220)	0.481** (0.213)	0.113 (0.249)	0.857 (0.882)	-0.0340 (0.293)	0.735 (0.648)	0.331 (0.253)
import_ratio	0.00936*** (0.00206)	0.00930*** (0.00209)	0.00578** (0.00242)	-0.0486 (0.0379)	0.00575** (0.00264)	-0.0438 (0.0321)	0.00942*** (0.00212)
trade_balance_c	-0.0563 (0.0807)	-0.0363 (0.0815)	0.126 (0.0924)	0.121 (0.298)	0.211* (0.109)	0.151 (0.231)	-0.0209 (0.0902)
labor_intensive_product	-5.420*** (0.613)	-5.533*** (0.615)	-0.0383 (0.753)	-	0.692 (0.640)	-0.372 (1.158)	-9.494*** (0.444)
intermediate_product	0.637 (0.405)	0.697* (0.411)	0.893* (0.459)	0.817 (0.780)	0.509 (0.332)	-0.00723 (0.773)	0.373 (0.288)
Constant	6.171*** (0.668)	6.234*** (0.681)	0.559 (0.562)	-0.485 (1.004)	-11.53*** (1.172)	0.315 (0.916)	-0.524 (0.992)
Country dummies	yes	yes	yes	yes	yes	yes	yes
HS section dummies	yes	yes	yes	yes	yes	yes	yes
N	1612	1579	1429	104	1310	163	1432
pseudo R ²	0.592	0.604	0.642	0.392	0.694	0.433	0.633

Notes: Dependent variable is tariff exclusions (products excluded =1, others=0); robust standard errors in parentheses; all independent variables are one year lag of each FTA's negotiation; * p < 0.10, ** p < 0.05, *** p < 0.01.

Table 4: The robustness checks for product exclusions B

	(1) traded products	(2) traded products	(3) non-traded products	(4) non-traded products
Intrade_creation_Baldwin_2	0.118*** (0.0232)	-	-	-
national_strategy_product	1.648* (0.938)	-	2.999*** (0.486)	-
trade_creation_dummy	-	0.202* (0.105)	-	-
politically_sensitive	-	0.613*** (0.131)	-	0.695*** (0.0601)
gdp_ratio	-0.209*** (0.0210)	-0.218*** (0.0181)	-0.197*** (0.0129)	-0.214*** (0.0124)
rca_c	-0.109*** (0.0424)	-0.0609* (0.0345)	-0.0416* (0.0213)	-0.0533** (0.0216)
rca_p	-0.000156 (0.00217)	0.00215 (0.00209)	0.000337 (0.000742)	0.000281 (0.000845)
gl_index	0.113 (0.249)	0.380* (0.220)	-	-
import_ratio	0.00578** (0.00242)	0.00936*** (0.00206)	-	-
trade_balance_c	0.126 (0.0924)	-0.0563 (0.0807)	0.181*** (0.0340)	0.0865** (0.0346)
labor_intensive_product	-0.0383 (0.753)	-5.420*** (0.613)	-0.661 (0.548)	-0.784 (0.483)
middle_product	0.893* (0.459)	0.637 (0.405)	-0.721* (0.375)	-0.835** (0.343)
_cons	0.559 (0.562)	6.171*** (0.668)	2.607*** (0.600)	3.001*** (0.563)
Country dummies	yes	yes	yes	yes
HS section dummies	yes	yes	yes	yes
N	1429	1612	4340	4340
pseudo R ²	0.642	0.592	0.366	0.370

Notes: Dependent variable is tariff exclusions (products excluded =1, others=0); robust standard errors in parentheses; all independent variables are one year lag of each FTA's negotiation; * p < 0.10, ** p < 0.05, *** p < 0.01.

Table 5: The results of marginal effect

variables	Full sample	small-trading group	big-trading group	Wald test
politically_sensitive	0.0883***	0.3377***	0.0550***	12.53***
national_strategic_product	0.1980*	0.2212	0.1639*	0.04
trade_creation_dummy	0.0290*	0.1150*	0.0277*	1.94
Intrade_creation_Baldwin_2	0.0141***	0.0121	0.0147***	0.03

Notes: * p < 0.10, ** p < 0.05, *** p < 0.01. Wald test was calculated by the difference of marginal effect between small-trading group and big-trading group.

Appendix

Table A: The stylized facts of non-traded, exclusive and sensitive products

FTAs	non-traded		non-traded & exclusive		non-traded & sensitive ^b		non-traded & sensitive ^c	
	tariff lines	Share ^a (%)	tariff lines	Share (%)	tariff lines	Share (%)	tariff lines	Share (%)
China-ASEAN FTA	237	28.87	12	1.46	20	2.44	104	12.67
China-Australia FTA	369	44.95	39	4.75	31	3.78	116	14.13
China-South Korea FTA	388	47.26	311	37.88	33	4.02	134	16.32
China-New Zealand FTA	516	62.85	33	4.02	51	6.21	222	27.04
China-Switzerland FTA	630	76.74	419	51.04	55	6.70	191	23.26
China-Pakistan FTA	657	80.02	234	28.50	63	7.67	222	27.04
China-Chile FTA	684	83.31	265	32.28	64	7.80	305	37.15
China-Peru FTA	697	84.90	389	47.38	62	7.55	219	26.67
China-Costa Rica FTA	745	90.74	177	21.56	67	8.16	241	29.35
China-Iceland FTA	795	96.83	86	10.48	72	8.77	265	32.28

Notes: (a) the share is calculated as the ratio of non-traded & exclusive products to total tariff lines in each FTA; (b) sensitive products are national strategic products; (c) sensitive products are political sensitive products.