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Global Supply Chains and the Regional Comprehensive Economic Partnership: Who Benefits?

Xiaojun Li

ISEAS – Yusof Ishak Institute
Department of Political Science, University of British Columbia

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Abstract

The recently signed Regional Comprehensive Economic Partnership (RCEP) promises to expand trade substantially for the 15 participating countries. This study unpacks the differential benefits of free trade agreements by drawing on insights from the emerging research program on the politics of global production networks and value chains. A firm's ability to benefit from trade agreements is a function of the firm's degree of supply chain linkages with partner countries. Leveraging on an original survey of more than 500 firms in China, the empirical analyses show that the more backward and forward supply chain linkages with RCEP countries a firm has, the more likely it is going to anticipate positive impact from the RCEP. Furthermore, these results hold even among exporters. These findings enrich our understanding on the political economy of preferential trade liberalization and global supply chains and offer policy suggestions for member countries hoping to maximize benefits for their businesses from the largest trade agreement in the world today.

Keywords: Global Supply Chains, Free Trade Agreement, Regional Comprehensive Economic Partnership

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30 Heng Mui Keng Terrace, Singapore 119614



6778 0955



6778 1735



admin@iseas.edu.sg



www.iseas.edu.sg

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1. Introduction

On 15 November 2020, after nearly a decade of negotiations, Australia, China, Japan, New Zealand, and South Korea as well as the ten ASEAN countries signed the Regional Comprehensive Economic Partnership (RCEP). It is the largest regional free trade agreement (FTA) to date, accounting for a third of the world's population and 30% of the global gross domestic product (Ministry of Trade and Industry Singapore 2020). Hailed as a modern and comprehensive free trade agreement, the RCEP covers not only further liberalization of tariff and non-tariff barriers to trade in goods and services, but also increased trade facilitation and overall enhanced business environment through regulations relating to intellectual property protection, government procurement practices, and e-commerce.

With the ongoing U.S.-China trade war and broader diplomatic strains between the world's two largest economies, the RCEP promises to raise total trade among the 15 members countries by \$428 billion and reduce trade among non-members by \$48 billion by 2030 (Petri and Plummer 2020). Who will likely to capture these gains? Existing research in international political economy (e.g., Milner 1989) generally holds that export-oriented firms are the winners from trade liberalization while import-competing firms are categorically worse off. However, this depiction may no longer be accurate today in a world increasingly connected by global supply chains (GSCs), whereby raw materials, parts, components, and services move across national borders multiple times before they are made into final products that are sold on world markets.

Engaging recent research on the global production networks and value chains by economists (e.g., Blanchard et al. 2016; Johnson and Noguera 2014; Orefice and Rocha 2014) and political scientists (e.g. Kim et al. 2018; Osgood 2017, 2018; Zeng and Li 2021), this paper argues that the preferential tariff and nontariff benefits provided by FTAs are more crucial for firms embedded in GSCs due to the constraints of supply chain networks, the disruption of which, whether due to geopolitical tensions or a global pandemic, will likely be more detrimental than to firms without supply chain linkages that can more easily divert their trade in the absence of established buyer-supplier relationships. This suggests that GSC integration can generate new distributional effects from trade liberalization even among exporters between those more heavily dependent on foreign value added in their intermediate or final exports and those less dependent on intermediate goods trade in their production activities.

More specifically, owing to improved access to the necessary production materials and intermediate inputs, firms whose products are manufactured with foreign value added should be more likely to tap into the benefits offered by FTAs with countries with which they have strong supply chain linkages. In addition, compared to producers of intermediate or final products who only serve the domestic market, businesses whose products are incorporated into the production of goods and services in partner countries should also be more likely to benefit from FTAs that increase their ability to effectively compete with suppliers from elsewhere in foreign markets. In other words, firms with substantial *backward* supply chain linkages (i.e., having a high level of foreign content in the production or export of their products) or *forward* supply chain linkages (i.e., having a high level of their products incorporated in foreign production or exports) should be able to reap the largest benefits from FTAs with countries with which they have supply chain linkages and are better equipped to capture the gains from trade in an integrated global economy.

The empirical analysis of this paper leverages an original survey of more than 500 Chinese firm managers in 2017. The survey asked a series of questions about the firms' trade profile, including the types of products they import and/or export and the countries with which they trade with. These questions are then used to construct measures of their supply chain linkages with RCEP countries. Additionally, managers were asked to evaluate whether or not the RCEP would have a positive impact on their business. Consistent with the theoretical expectations, the findings provide substantial support to the conjecture that high supply chain linkages with RCEP member countries make a firm more likely to anticipate positive impact from the agreement.

The remainder of this paper is organized into five sections. The next section theorizes the differential benefits of FTAs for firms with varying degrees of supply chain linkages with the member countries. Section 3 details the survey design, sampling schemes, and characteristics of the sampled firms. Section 4 describes the construction of supply chain measures using questions from the survey. Section 5 presents the main findings of the data analysis. The last section concludes with some discussions of the theoretical and policy implications of this study.

2. Global Supply Chains and the Differential Benefits of FTAs

Over the past few decades, the growing fragmentation of production across national borders has given rise to the phenomenon of global supply chains (also referred to as global value chains, global production networks, global commodity chains, etc.).¹ International trade links domestic and foreign suppliers in a series of complex interactions and is increasingly influenced by the international strategies of firms that undertake foreign direct investment, outsourcing, and other production-related activities in locations that offer the necessary raw and intermediate materials at the most competitive prices or with the best quality. The rising share of intermediate and capital

¹ For a review of the history of the global supply chain research program, see Zeng and Li (2021).

products in global trade volumes is accompanied by the decline in traditional trade with each country producing finished products that are exported to one another.

Parallel to the rise of global supply chains is the proliferation of free trade agreements, including regional trade agreements, preferential trade agreements, and custom unions (Baccini 2019). According to data from the WTO, the number of FTAs in force has increased from just two in 1958 to 348 in 2021 (WTO 2021). Two features distinguish FTAs from traditional multilateral trade liberalization under the WTO. First, FTAs offer preferential tariffs to their member states beyond traditional most-favoured-nation (MFN) tariffs (Bhagwati 2008). Second, on nontariff issues, FTAs contain provisions that are often much stronger than those embodied in multilateral agreements, such as ones addressing trade-related investment measures, trade-related intellectual property rights, services, and public procurement (Horn et al. 2010).

How does a free trade agreement alter the distributional consequences of firms with and without GSC linkages? To answer this question, it would be useful to take a closer look at how these firms face difference incentives in making use of the FTAs. Additional tariff reductions between partner countries are the most immediate benefit of an FTA. But taking advantage of these benefits is not without costs for the firm (Bernard et al. 2012; Cruz et al. 2018; Dai et al. 2018; Kawai and Wignaraja 2011). One example is the complex rules-of-origin (ROO) requirements firms need to qualify for preferential tariffs, which involves calculating and certifying the domestic content of the goods they export. Other ROO-related issues, such as obtaining adequate documentation and dealing with administrative procedures, could lead to time delays, which in turn add to the overall business costs for firms.

For firms without substantial supply chain linkages, these costs may outweigh the potential tariff benefits. Oftentimes the difference is small or even negligible between the tariffs codified in the FTA and the MFN tariffs under WTO or other existing preferential arrangements—after all, tariffs are lower-bounded by zero. Furthermore, not being dependent on suppliers or clients in specific geographic locations shaped by the supply chains means that these firms can simply divert trade to other markets if not taking advantage of the FTAs makes their products less competitive. These considerations partly explain why FTA usage globally is very low (Thomson Reuters and KPMG 2015).

Conversely, firms embedded in GSCs have more reasons to make use of FTAs despite the additional administrative and business costs. First, in the case of backward supply chain linkages, that is, when a firm uses foreign inputs for the production of either intermediate or final goods, preferential tariffs will reduce the costs of inputs and therefore of its products. Since these inputs such as raw materials or high-value components frequently constitute an integrated part of the production network and cannot be easily substituted by sourcing from either domestic or other foreign markets at a competitive price, the gains from lower tariffs will be substantial. Additionally,

if these firms in turn sell their products to other partner countries, they can benefit from the lower import tariffs on their exports. This double saving has the potential to increase the firm's competitiveness in both domestic and international markets.

Second, in the case of forward supply chain linkages, that is, when a firm's domestic value added ends up in the production and exports of foreign intermediate or final goods, preferential trade liberalization will lower import tariffs in the destination countries, which in turn reduces the costs of its products and therefore increase its competitiveness in markets of FTA members. The revenues from increased sales and tariff savings can accrue to either the domestic producers or the foreign clients, but since forward-linked firms are more likely to be at the lower end of the value chain, FTAs would enable these firms to offer a larger share or even all of the gains to their foreign buyers as a means to foster and maintain their partners, especially if the latter are considering the relocation of their supply chain networks to countries with cheaper labour and production costs.

Third, FTAs often go beyond tariffs and cover a range of behind-the-border issues—such as intellectual property rights protection, investment regulations, and contract enforcement—that are particularly attractive to firms that export knowledge-intensive products or services to countries with a weak regulatory framework. An FTA's trade facilitation provisions can also provide important means of reducing the burden for businesses that need to move their goods across multiple borders. In addition, FTAs can facilitate tariff-jumping foreign direct investment (FDI) (Blonigen et al. 2004), allowing firms to expand into markets previously or newly closed due to high tariffs or antidumping duties, by investing and relocating their production to partner countries that have FTAs with those countries. Last but not least, the potential of FTAs to attract FDI into the home country also creates opportunities for firms embedded in GSCs to climb up the value chain, moving from OEM (original equipment manufacturer) to ODM (original design manufacturer) and even to OBM (original brand manufacturer) as they form joint ventures with their technologically more advanced partners.

All of the above discussions suggest that *firms with strong supply chain linkages with an FTA partner, either forward or backward ones, should be more likely to benefit from the FTA*. In the remainder of the paper, I test this hypothesis empirically in the context of the recently signed RCEP using an original firm-level survey in China.

3. Survey Design

To understand the differential benefits of free trade agreements as a function of the firm's degree of supply chain linkages with partner countries, an original survey was designed and implemented in China between April and June 2017. While the RCEP was still being negotiated at the time of the survey, it is reasonable to expect that firms would already have been following the agreement carefully and may have even made some adjustment in anticipation of future trade liberalization

should the negotiations conclude. This is backed by theoretical work on forward-looking firms' decisions concerning entry, exit, export, and innovation (Costantini and Melitz 2008) and empirical studies that demonstrate that firms are able to adjust well in advance of the final FTA ratification (Gulotty and Li 2020), leading to significant anticipatory effects on trade flows: on average countries experiencing a 25% increase in trade four years before FTAs enter into force (Magee 2008; Baccini and Urpelainen 2014). Furthermore, as Dür, Baccini and Elsig (2014) argue, these anticipatory effects are largest for “modern” PTAs such as the RCEP, with more ambitious agreements having larger anticipatory effects.

The survey was administered by a marketing research firm in China, which has recently become a cost-effective tool for survey participant recruitment in China (Li et al. 2018). The survey targeted firm managers, defined as those holding managerial positions, such as general managers, vice presidents, directors, and chief executive officers (CEOs). The company used a variety of methods to recruit these people into the subject pool, mostly by inviting managers who had enlisted the company to help with their own marketing research.² Importantly, the marketing research company was only responsible for subject recruitment, not the design of the questionnaire, which was distributed as a link directing the respondent to an external website, where the survey was hosted.

When the survey was in the field, the company sent out batches of invitations to a random sample of the manager pool to reach the target sample size of 500. With such an “opt-in” method of subject recruitment, all of the potential respondents that met the inclusion criteria were invited to take part in the survey, and the survey link expired once a pre-set number of responses was reached. This sampling procedure made it difficult to calculate response rate as in traditional surveys, since the invitations were rolled out in phases rather than based on a predetermined size. In total, 569 firm managers successfully completed the survey.

The sampled firms come from 27 of the 32 provinces and municipalities in China. The five provinces not represented in our sample are Hainan, Inner Mongolia, Ningxia, Qinghai, and Tibet. The top four provinces are Guangdong (19.6%), Shanghai (13.4%), Beijing (12.5%), and Jiangsu (7.9%). More than half of the firms (57.1%) were founded in or after 2000. The majority of the firms are private (60.3%), followed by state-owned firms (16.9%), foreign-invested firms (14.4%), joint ventures (6.7%), and collective firms (1.8%). In terms of the sectoral composition of our sample, the majority of the firms are in manufacturing industries (35.8%), followed by the machinery (17.1%), textile (7.9%), basic metal (5.5%), and rubber and plastic (4.8%) industries. With regard to size, 34% of the firms have more than 500 employees, 29.4% employ between 201 and 500 employees, and 7.1% have fewer than 50 employees. These firms are also fairly engaged in international trade and investment, with about a third (30.6%) owning a facility or having

² For recent studies that employ a similar method to recruit firm managers as survey respondents, see Cao et al. (2021); Li and Zeng (2019); Zeng and Li (2020).

investments in another country. Additionally, 50 % and 73.1% of the firms reported having imported and exported in the past year, respectively.

The outcome measure is based on the following question in the survey: “The Regional Comprehensive Economic Partnership Agreement (RCEP) is a large-scale trade agreement. If the RCEP can be successfully signed, what impact will it have on your company’s business?” In total, 235 of the 569 sampled firms (41.3%) replied that the RCEP would have a “positive impact” and another 89 (15.6%) thought that the impact would be both “positive and negative”. Only one firm suggested that the RCEP would only have “negative impact” and 45 (8.9%) mentioned that the agreement would have “no impact” on their business. The remaining 199 firms (34.9%) either had no opinion or had not heard about the agreement. Overall, this general positive outlook is consistent with the logic of forward-looking firms and suggests that the majority of the firm managers in the sample have been paying attention to the RCEP and already thinking about its potential effects.

4. Measuring Supply Chain Linkages

To capture the firms’ supply chain linkages with RCEP member countries, the survey asked each firm manager whether or not the firm had sold products abroad (exported) or purchased goods from abroad (imported) in the last year from a list of countries both within and outside the RCEP membership. Out of the 569 firms, 176 (30.9%) have neither exported nor imported to RCEP countries in the previous year. Another 36 (6.3%) have imported products from RCEP countries to be either directly sold or used in the production of goods for the domestic market. Both types of firms do not have direct supply chain linkages with RCEP countries, as they do not engage in exports, though they might indirectly become part of the supply chains of exporters if they supply inputs for their production. Nevertheless, given that these firms conduct their business exclusively within the Chinese border, the theoretical discussion above suggests that they are less likely to benefit from RCEP compared to the next two types of firms.

Firms that engage in exports are more likely to be directly embedded in GSCs, depending on what they sell to foreign markets. The 188 “exclusive exporters” (33%) that reported having exported but not imported in the previous year will have forward supply chain linkages with RCEP countries as long as they do not *exclusively* export final goods, with the linkage being stronger the more the firm exports intermediates and raw materials. These firms may also have backward supply chain linkages with RCEP countries if they use inputs from the exclusive importers that contain foreign materials.

Finally, the remaining 169 firms (29.7%) reported having both exported and imported. Like exclusive exporters, these firms can have forward supply chain linkages with RCEP countries as long as they supply intermediates and raw materials to foreign producers. They can also have

backward supply chain linkages with the RCEP countries if their exports of final products contain imported parts and components, which can be from their own imports or from their suppliers that use imported materials. The processing firms ubiquitous in China fall into this category.

The above classification based on the import and export profile of firms provides a crude measure of supply chain linkages of the sample firms with the RCEP countries. For example, firms that only export final products are lumped together with firms that primarily export intermediate products and raw materials, but the former has no forward supply chain linkages, though it is possible that such firms can have backward linkages through their use of inputs sourced from domestic importers. Overall, therefore, it is reasonable to assume that exporters should be more embedded in GSCs than importers and firms not engaged in trade.

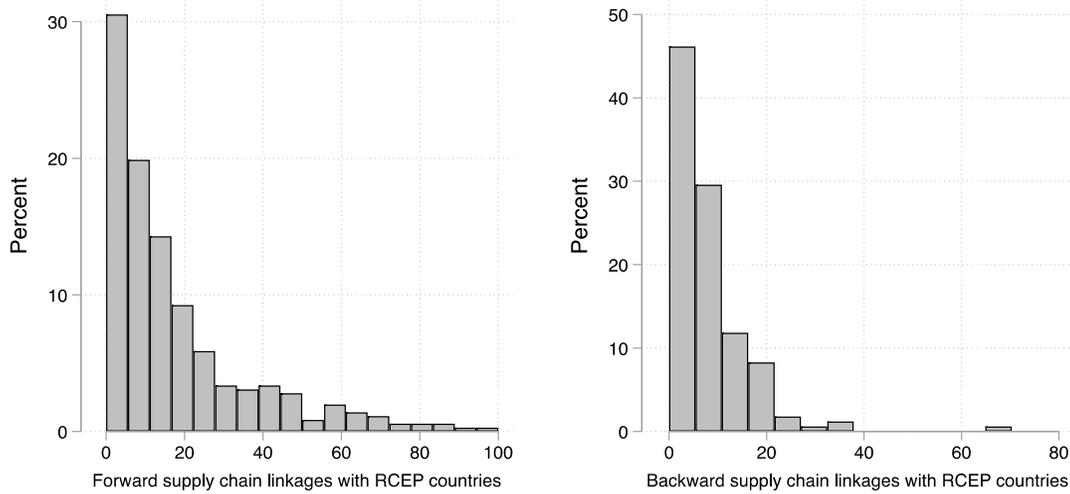
For firms that export to RCEP countries, it is possible to construct a more fine-grained measure of supply chain participation using a second set of questions in the survey that tap their degree of forward and backward supply chain linkages. First, the survey asked firms that have exported to indicate the share of intermediate products or raw materials in their exports. This value is then multiplied by the firm's exports as a share of its total sales. The resulting quantity—the share of a firm's intermediate exports in sales—can be regarded as an approximate measure of a firm's degree of forward supply chain linkages.³ Second, the survey asked firms who had purchased goods from abroad the share of imported parts and components in their final products. These final products are either exported or sold on the domestic market, but only the former count toward the firm's backward supply chain linkages. To compute this measure, I first calculate the share of a firm's final exports in sales, which is then multiplied with the share of imported parts and components in final products to obtain the share of a firm's final exports with foreign content in its sales, under the assumption that the final products for both foreign and domestic markets have the same amount of foreign content.

Figure 1 plots the distribution of the forward and backward supply chain measures for firms that export to RCEP countries. In the left panel, nearly a third of these firms only sell final products and thus do not have forward supply chain linkages, compared to firms who export more intermediate goods, including a few that almost exclusively export intermediates that may end up in products sold to third countries. The right panel plots the measure of backward supply chain linkages for firms that both imports and exports (exclusive exporters do not have backward supply chain linkages by construction). Like the measure of forward supply chain linkages, the distribution is skewed, with nearly half of the firms not using any of the imported parts and

³ Strictly speaking, the definition of forward supply chain linkages is the share of domestic intermediate input in the export of the foreign country. This would require the firm knowing how their intermediate exports are being used by foreign clients, which is highly unlikely. Assuming that at least some of these intermediate exports will be used for domestic consumption, we can think of this measure as providing the upper bound of the firm's degree of forward supply chain linkages.

components for the final products they export. The theoretical discussion suggests that firms with higher forward and/or backward supply chain linkages should be more likely to benefit from the RCEP.

Figure 1: Supply Chain Linkages with RCEP Countries in the Sample Firms



Note: Forward supply chain linkages are calculated for firms that export to RCEP countries (N = 357). Backward supply chain linkages are calculated for firms that both export to and import from RCEP countries (N = 169). Source: Author’s Survey.

5. Data Analysis

I use the following equation to estimate the effects of global value chains on firm evaluation of the potential benefits of the RCEP:

$$\Pr(\text{Positive Impact} = 1) = F(\alpha + \beta GVC + \theta X + \epsilon)$$

The dependent variable is the firms’ responses to the question probing the likely impact of the RCEP, transformed into a binary measure with “1” indicating “positive impact” and “0” otherwise. F is the cumulative logistic distribution. The logit link function is used to model the probability of “positive impact” as a function of the covariates. The key independent variable is the different measures of supply chain linkages as described in the previous section. The vector X includes the following control variables that may influence the ability of the firm to benefit from the RCEP (see appendix for summary statistics and correlation matrix).

Firm Size: Previous studies (e.g., Melitz 2003; Thacker 2000) have shown that larger firms are more likely to possess competitive edges in international markets due to their greater ability to take advantage of economies of scale. Two measures are used to capture firm size. First, the number of employees the company employs across all locations is a categorical variable from less than 10 employees to “more than 500 employees”. Second, the volume of the firm’s sales (in RMB) in the past year is measured on an eight-point scale from “less than 5 million” to “200 million and more”.

Productivity: Theories of firm heterogeneity and trade (e.g. Melitz 2003; Bernard et al. 2007; Eaton, Kortum, and Kramarz 2011) suggest that trade liberalization should raise average industry productivity through the reallocation of resources within the industry, leading highly productive firms to expand to enter the export market, less productive firms to produce only for the domestic market, and the least productive firms to exit the market. This logic suggests that more productive firms should benefit disproportionately from preferential trade liberalization. Firm self-assessment of their productivity relative to that of other companies in the same industry is used to code this variable on a five-point scale—“significantly less productive,” “somewhat less productive,” “about the same,” “somewhat more productive,” and “significantly more productive”.

State Ownership: Previous studies (e.g., Blanchard and Matschke 2015; Milner 1989) suggest that multinational corporations may be more likely to benefit trade liberalization due to the costs that protectionism may impose on their intra-firm trade. In contrast, state-owned enterprises often have better access to financial support and enjoy preferential policies from the government, which make it easier for them to forego the potential benefits from the FTA. To account for this possibility, I include a dummy variable for a firm’s ownership type that equals “1” if a firm is a state-owned enterprise (SOE) and “0” otherwise.

Region: Finally, two dummy variables corresponding to coastal and central provinces are included to account for the fact that firms in these provinces are more internationally oriented and thus more likely to take advantage of the RCEP.

Table 1 presents the results from three logistic regression models with robust standard errors clustered at the industry. Model 1 includes the full sample of firms and the two crude measures of supply chain linkages with RCEP countries, which are both positive and statistically significant as predicted by the theory. One way to interpret the substantive effects is to use the odds ratio, i.e. the exponentiated value of the coefficient estimate. Specifically, the odds of reporting positive impact of the RCEP for the exclusive exporters and firms that both export and import are 1.5 and 2.5 times, respectively, as many as those of exclusive importers and firms that do not engage in trade.

It is worth noting that the coefficient estimate for firms that both import and export and thus have more supply chain linkages is more than twice as large as that for firms that only export. This suggests that, even among exporters traditionally understood as the main beneficiaries of trade liberalization, those that are more embedded in the GSCs will benefit even more. This can be further ascertained in Models 2 and 3, which use more fine-grained forward and backward supply chain linkages with RCEP countries, respectively. Because these measures only apply to firms that (exclusively) export, the sample sizes are understandably smaller. As expected, the effects of both forward and backward supply chain linkages are positive and statistically significant.

Table 1: Global Value Chains and Positive Evaluation of the RCEP

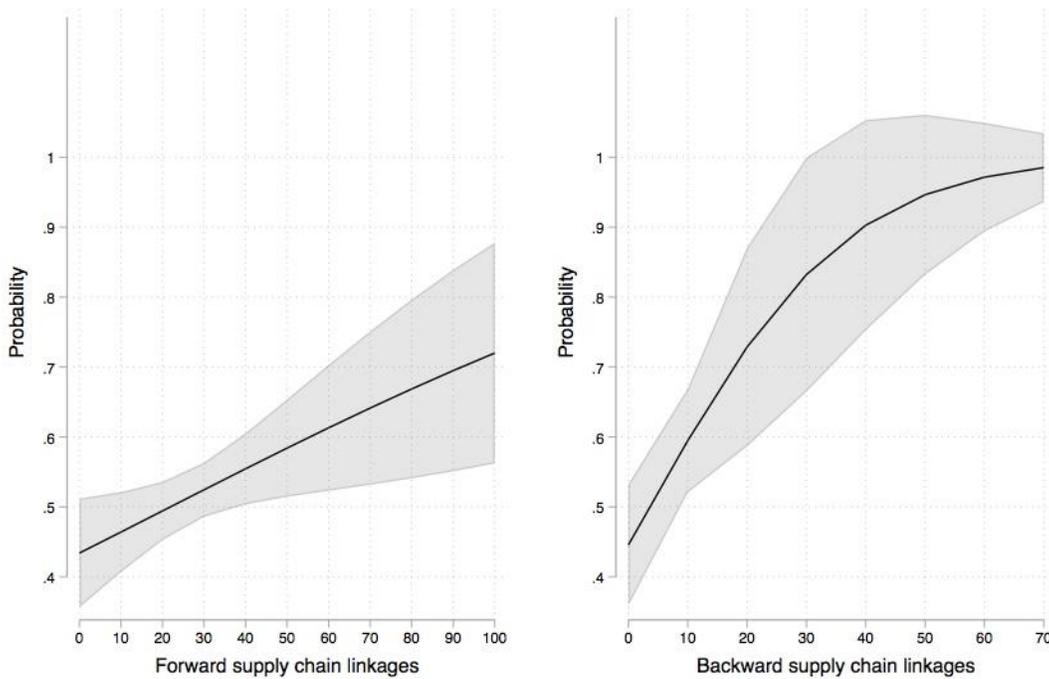
	Model 1	Model 2	Model 3
Exclusive export	0.410*** (0.151)		
Export and import	0.913*** (0.195)		
Forward supply chain linkages		0.0131** (0.00575)	
Backward supply chain linkages			0.0677** (0.0273)
Employees	0.103 (0.131)	0.180* (0.0925)	0.528*** (0.197)
Sales	-0.0301 (0.0711)	-0.134*** (0.0455)	-0.381*** (0.0822)
Productivity	0.495*** (0.125)	0.630*** (0.147)	0.627*** (0.143)
SOE	-0.484*** (0.130)	-0.450** (0.177)	-0.312 (0.395)
Coastal provinces	-0.00607 (0.592)	0.0467 (0.677)	0.713 (0.642)
Central provinces	0.747 (0.788)	0.582 (0.665)	1.737** (0.683)
Constant	-2.848*** (0.805)	-2.667*** (0.800)	-3.301** (1.389)
Observations	556	354	167
Pseudo R2	0.0754	0.0704	0.110
chi2	96.91	58.61	114.9
Log-likelihood	-349.9	-228.0	-101.9

Note: Robust standard errors clustered by industry in parentheses; *** p<0.01, ** p<0.05, * p<0.1

Figure 2 plots the predicted probabilities of a firm reporting positive impact of the RCEP as a function of the forward and backward supply chain measures. These are calculated using the results from Model 2 and 3 with the rest of the control variables held at their mean. In both panels of Figure 2, a firm with neither forward nor backward supply chain linkages with RCEP countries has about a four-in-ten chance of reporting that the RCEP would have positive impact for its business. Raising the forward and backward supply chain linkages to the highest value in the sample will increase those probabilities substantially to over 0.72 and 0.98, respectively.

Turning to the control variables in the models, three things are highlighted. First, consistent with existing studies, firm productivity is positive and statistically significant across all three models, indicating that the productive firms are more likely to report positive impact. Second, as expected, state-owned firms are less likely to report positive impact of the RCEP than private or foreign firms, with the effects being statistically significant in Model 1 and 2. Finally, the effect of firm size is ambiguous. The coefficient estimates of the two measures of firm size, employee and sales, have opposite signs, though they only reach statistical significance in the sample of export firms. However, given that the two measures are highly correlated (Spearman’s rho = 0.61), the combined effect is not significant. This suggests that firm size may not be as important a factor when it comes to the ability of the firm to benefit from the RCEP.

Figure 2: Supply Chain Positions and Positive Evaluation of the RCEP



Note: The predicted probabilities and 95% confidence intervals are calculated using estimates from Models 2 and 3 in Table 1 with the control variables held at their mean.

6. Conclusion

This paper sets out to examine the distribution of benefits from FTAs among firms with varying degree of value chain linkages with partner countries in the agreement. Using an original survey of Chinese firms during the RCEP negotiations, I show that the more backward and forward supply chain linkages with RCEP countries a firm has, the more likely it is going to anticipate positive impact from the RCEP. These results suggest that the growing fragmentation of global production networks requires us to move beyond traditional theories of trade liberalization characterized by a simple dichotomy that pits export-oriented against import-competing firms.

The findings of this paper also contribute to the “new new trade theory”, which demonstrates that only the largest and most productive firms engage in international trading activities (Antràs and Helpman 2004; Bernard et al. 2007; Melitz 2003). While this study confirms these insights on firm heterogeneity with respect to productivity, the fact that the effects of supply chain linkages hold even among exporters suggests that another important dimension that drive firm preferences is what products firms trade and what position they occupy in the global supply chains.

What broader policy implications can we draw? On April 9, 2021, Singapore became the first participating country to ratify the RCEP and deposited its ratification instrument with the ASEAN countries, with a hope that the agreement would “enable businesses to consolidate their production across participating countries, leading to cost- and time-savings” (Ng 2020). This study shows that such benefits may not accrue to firms equally, and it will be those that are more deeply embedded in the supply chain networks with RCEP countries that would be more likely to capture those gains in trade. Therefore, when designing policy instruments and support programs to help firms tap on the opportunities provided by the agreement, policymakers may want to cater to the different needs of firms depending on their GSC positions instead of a “one size fit all” solution.

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Appendix: Summary Statistics and Correlation Matrix

Variable	Obs	Mean	Std. Dev.	Min	Max
a. Exclusive export	569	0.41	0.49	0	1.00
b. Export and import	569	0.33	0.47	0	1.00
c. Forward supply chain linkages	569	0.30	0.46	0	1.00
d. Backward supply chain linkages	357	17.49	19.08	0	100.00
e. Forward supply chain linkages	169	8.13	8.20	0	70.31
f. Employees	569	3.89	0.98	1	5.00
g. Sales	560	5.78	1.91	1	8.00
h. Productivity	565	3.74	0.92	1	5.00
i. SOE	569	0.17	0.37	0	1.00
j. Coastal provinces	569	0.81	0.40	0	1.00
k. Central provinces	569	0.12	0.33	0	1.00

	a	b	c	f	g	h	i	j	k
a	1.00								
b	-0.01	1.00							
c	0.19	-0.47	1.00						
f	0.10	0.07	0.16	1.00					
g	0.08	0.08	0.12	0.62	1.00				
h	0.23	0.02	0.18	0.27	0.27	1.00			
i	-0.06	0.04	-0.03	0.29	0.21	0.01	1.00		
j	-0.05	0.04	0.08	-0.06	-0.06	0.06	-0.12	1.00	
k	0.07	0.00	-0.09	0.02	0.03	-0.08	0.08	-0.76	1.00