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硕 士 学 位 论 文

针对发展中国家的进口限制政策的贸易
偏转和贸易衰退效应的研究——
以泰国为例

Trade Deflection and Trade Depression
Effects of Import Restriction Policies on
Developing Country: The Case of Thailand

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摘要

基于反倾销扩散的视野，本文研究在 1992 至 2013 年期间，泰国最大的贸易伙伴，即美国、欧盟、澳大利亚和印度，征收的反倾销（AD）关税对泰国向其它可替代市场的出口的影响。利用扩展的引力模型以及关于产品的面板数据，本文通过两重差分的方法识别歧视性的进口限制政策对泰国向最大的 35 个出口市场的出口在贸易偏转和贸易衰退方面的影响。本文的主要目的是说明泰国作为最大的发展中国家之一遭受最多的反倾销调查，但泰国有实力将贸易偏转到其它的市场。本文找到的贸易偏转的证据显示，在样本期内，当美国、欧洲和印度实行反倾销税时，泰国对其它市场的出口上升了。有趣的是，对澳大利亚的反倾销政策的反应是泰国对其它市场出口的略微下降。另一方面，当美国对第三国施加反倾销税时，存在着显著的贸易衰退效应，也就是说泰国对第三国的出口下降了。

关键词：反倾销；贸易偏转；贸易衰退；泰国；发展中国家

Abstract

In the light of antidumping proliferation, this paper investigates the impact of antidumping (AD) duty imposition by Thailand's top trading partners, namely U.S., EU, Australia and India, on Thailand's export to alternative markets during the period 1992-2013. Using augmented gravity model on a product-level panel dataset, the paper applies difference-in-difference approach to identify trade deflection and trade depression effects of discriminatory import restrictions on Thailand's exports to top 35 destinations. The paper primarily aims to reflect the ability of Thailand, as one of the top developing countries facing the most AD investigations in the world, in deflecting trade to alternative markets. The paper found evidence of trade deflection, an increase in Thailand's export to alternative markets, in response to U.S., EU and India AD duty during the study period. Interestingly, with respect to Australia AD policy, the paper shows a minimal decrease in Thailand's export to alternative market. On the other hand, when U.S. AD duty is imposed on the third country, there is a significant trade depression effect, a decrease in Thailand's export to the targeted third country.

Key Words: Antidumping; Trade Deflection; Trade Depression; Thailand; Developing Country

Contents

Chapter 1 Introduction	1
1.1 Background	1
1.2 Literature Review	7
Chapter 2 Empirical Methodology	11
2.1 Data	11
2.2 Empirical Model.....	11
2.2.1 Difference-in-Difference Model Estimating Trade Deflection.....	14
2.2.2 Difference-in-Difference Model Estimating Trade Depression	18
Chapter 3 Empirical Results	20
3.1 Difference-in-Difference Estimates of Trade Deflection.....	20
3.2 Difference-in-Difference Estimates of Trade Depression.....	25
Chapter 4 Conclusion	29
References	31
Appendices	33
Acknowledgement	47

List of Tables

Table 1: Antidumping Initiations by Exporting Country, 1995-2013	3
Table 2: Thailand's and Malaysia's Major Export Markets, 2013	5
Table 3: AD Initiations on Thailand and Malaysia, 1995-2013	6
Table 4: Thailand's and Malaysia's Share of Major Export Products and AD Initiation	16
Table 5: Difference-in-Difference Estimates of Trade Deflection	21
Table 6: Difference-in-Difference Estimates of Trade Depression	26

Chapter 1 Introduction

1.1 Background

Despite the fact that many nations have undergone significant trade liberalization by reducing permanent tariffs, there has also been an upward trend in contingent trade protections especially the use of antidumping (AD). Gamberoni and Newfarmer (2009) from the World Bank report that there has been a substantial rises in AD measures since the global economic crisis in 2008. With rapid growth of international trade, the proliferation of AD use is substantially increasing and likely to continue in the near future. As argued by Egger and Nelson (2011), many concerns are raised as recently the use of AD as a trade protection weapon is not only limited to traditional users, notably the United States, European Union, Canada and Australia. Since the last decades new users, most of which are developing countries, also increasingly exercise this kind of trade protection. Vandenbussche and Zanardi (2010) identifies that there is an increasing trend of AD proliferation during 1980-2000 and that the new adopters of AD laws are developing countries including countries from Asia, Latin America and Eastern Europe. Even though there have been a growing trend in undergoing significant trade liberalization among many nations, at the same time it has been undone through substitution from tariffs to non-tariff barrier. In fact, tariff reduction as a result of trade liberalization is substituted by 'ad hoc' AD protection which is supposed to combat against unfair trade but has predominantly misused as an instrument of industrial policy protecting the welfare of their own national industries. Moore and Zanardi (2008) empirically shows that tariff reductions lead to higher probability of filing AD petition among developing countries that are intensive users of AD policy. Hence, understanding the international linkage of AD policy becomes increasingly essential as its use rises and AD investigations proliferate among the new users has been the recent trend.

Even though a growing number of countries have initiated AD complaints at unprecedented rates, a concern of how this kind of trade protection can impact trade flows both directly and indirectly has not been strongly emphasized. As Bown and Crowley (2007) points out that the effects of import restriction on trade flows is not only limited to the country targeted by the AD itself, but also creating an indirect 'trade deflection' and 'trade depression' effect on the trade patterns to the third market countries as well. The imposition of discriminatory import restrictions can cause a surge of targeted country trade to the third market as trade is deflected from the country imposing the restriction. At the same time, trade can be depressed which is a

reduction in the third country's exports to the targeted country as a result of AD imposition. As a consequence, the recent proliferation of import restrictions raises serious concerns on evaluating the true impacts of its imposition.

This paper is inspired by an excellent paper of Bown and Crowley (2010) which analyzes the effects of U.S. and EU import restrictions on China's export to the third markets during China's pre-World Trade Organization (WTO) accession period. In order to fill in the niche of existing literatures, this paper aims to empirically investigate the impact of import restrictions by Thailand's top trading partners, notably U.S., EU, Australia and India, on Thailand's exports to alternative markets during the year 1992-2013. The paper contributes to previous literatures by reflecting the ability of Thailand, as a developing country, in deflecting trade when facing with discriminatory import restrictions as well as an impact of the country's export to the third country when the third country is facing import restriction.

Thailand is particularly an interesting developing country to analyze for a variety of reasons. Thailand is one of the main developing countries frequently targeted for AD imposition from its trading partner according to the WTO database (2014) shown in table 1. During 1995-2013, Thailand ranks the 5th in the world as a main target for AD petition, and ranks the 1st among developing countries excluding China and Chinese Taipei. Among Australia's, India's, EU's and U.S.'s AD initiations, Thailand accounts for 6.2%, 5.5%, 4.4% and 1.8% of the total caseload filed by the country respectively. Seemingly, Thailand is among the top developing countries targeted for AD petition by these four trading partners. Moreover, Thai economy heavily relies on its export sector as it has contributed more than 50% of the country's GDP since the year 2000. Facing import restriction imposed by its trading partner will certainly induce a substantial impact on the growth of Thailand's economy. Thailand, therefore, is a suitable candidate for analyzing whether developing country will distort trade flow to the alternative markets when facing import restrictions. An analysis of impact from AD imposition on Thailand's economy would provide one insight on how the widespread AD protection may affect developing economy.

Table 1: Antidumping Initiations by Exporting Country, 1995-2013

Exporting Country	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Total
Total	157	226	246	264	359	296	372	311	234	220	200	203	166	218	217	173	165	209	283	4519
China	20	43	33	27	43	43	55	50	53	49	53	73	62	78	78	44	51	60	74	989
Korea, Republic of	14	11	15	27	35	23	23	23	17	24	12	10	13	9	8	9	11	22	25	331
United States	12	21	15	16	14	13	15	11	21	14	12	11	7	8	14	19	10	9	13	255
Taipei, Chinese	4	9	16	10	22	14	19	16	13	21	13	13	6	11	12	5	9	22	16	251
Thailand	8	9	5	2	19	12	17	12	7	9	13	8	9	13	8	5	8	10	14	188
Japan	5	6	14	14	22	12	14	13	16	9	7	9	4	3	5	5	5	6	11	180
India	3	11	8	13	13	10	12	16	14	8	14	6	4	6	7	4	7	10	11	177
Indonesia	7	7	9	5	20	13	18	12	8	8	14	9	5	11	10	4	5	6	6	177
Russian Federation	2	7	7	13	18	12	9	20	2	8	4	5	6	2	4	2	3	3	5	132
Brazil	8	10	5	6	13	9	13	3	3	10	4	7	2	3	12	3	3	3	6	123
Malaysia	2	3	5	4	7	9	6	4	8	6	14	5	7	10	7	4	2	3	8	114
Germany	7	9	13	8	11	6	9	7	3	2	2	2	4	1	3	3	2	3	7	102
European Union		1	2	4	7	9	9	10	10	3	5	3	2	4	6	9	3	5	8	100
Ukraine	2	3	4	9	9	7	6	8	3	1	5	4	1	2	3	2	-	3	3	75
South Africa	2	6	4	5	4	6	9	10	4	-	2	2	1	3	1	1	1	2	3	66

Source: WTO, 2014

In the empirical investigation, the paper uses augmented gravity model of Thailand's product-level exports to the third markets in order to estimate the impacts of product-level AD duties imposed by Thailand's top trading partners over the 1992-2013 period. In order to identify the trade deflection and trade depression effects in particular, difference-in-difference approach is applied. The paper uses a dynamic panel data constructing from a dataset of Thailand exports into 35 countries to examine the effect of import restriction imposed by U.S., EU, Australia and India. This empirical approach reflects whether trade is deflected from those imposing-policy countries to the third markets. In addition, the paper also identifies a second impact on Thailand's exports; when U.S., EU and India impose a restriction on third country's exports, Thailand's exports to the third country may be depressed.

In analyzing the effect of a change in import restriction policy by Thailand's top trading partners, the paper focuses on the U.S., EU, Australia and India for identifying trade deflection because of two main reasons. First, these countries are among the four of Thailand's largest destination markets for its exports as presents in table 2.¹ In 2013, U.S., EU, Australia and India constitutes 11.15%, 9.79%, 5.01% and 2.51% of Thailand's total exports. Second, these countries, especially Australia and India are among the top countries imposing AD duties on Thailand the most, as indicates in table 3. Therefore, it is expected that Thailand's trade deflection will derive from these countries if Thailand's exporter are able to deflect trade.

In brief, the empirical results show that there is evidence of trade deflection, an increase in Thailand's exports to alternative markets, associated with U.S. and EU AD policy at different lagged years, whereas only minimal trade deflection effect can be observed under India AD measure. Surprisingly, the paper also founds a slight decrease in Thailand's export volume, specifically among consumption goods, to alternative destinations in response to Australia AD restriction. Therefore, in the face of AD attack, an ability of Thailand in deflecting trade to alternative destinations may vary across different imposing countries.

¹ While China and Japan are also among the largest export markets of Thailand, these two countries are not chosen here because they are not among major countries filing AD investigation against Thailand's exports.

Table 2: Thailand's and Malaysia's Major Export Markets, 2013

Rank	Export Market	Share of Total Exports	
		Thailand	Malaysia
1	China	0.1320	0.1560
2	USA	0.1115	0.0935
3	Japan	0.1077	0.1273
4	European Union	0.0979	0.0976
5	China, Hong Kong SAR	0.0639	0.0502
6	Malaysia	0.0630	0.0000
7	Singapore	0.0544	0.1611
8	Indonesia	0.0527	0.0532
9	Australia	0.0501	0.0470
10	Viet Nam	0.0348	0.0214
11	India	0.0251	0.0414
12	Philippines	0.0244	0.0150
13	Rep. of Korea	0.0222	0.0421
14	Cambodia	0.0206	0.0012
15	Myanmar	0.0184	0.0036
16	Lao People's Dem. Rep.	0.0182	0.0001
17	United Arab Emirates	0.0149	0.0204
18	Saudi Arabia	0.0144	0.0055
19	Brazil	0.0109	0.0062
20	Mexico	0.0090	0.0066
21	Switzerland	0.0078	0.0013
22	Canada	0.0072	0.0041
23	Russian Federation	0.0056	0.0032
24	New Zealand	0.0056	0.0070
25	Turkey	0.0054	0.0045
26	Pakistan	0.0046	0.0084
27	Bangladesh	0.0041	0.0080
28	Israel	0.0033	0.0000
29	Sri Lanka	0.0020	0.0029
30	Nigeria	0.0020	0.0020
31	Iran	0.0016	0.0050
32	Yemen	0.0013	0.0026
33	Jordan	0.0013	0.0008
34	Panama	0.0012	0.0006
35	Mozambique	0.0007	0.0003

Source: UN COMTRADE, 2014

Table 3: AD Initiations on Thailand and Malaysia, 1995-2013

Exporting Country	Thailand		Malaysia	
	No. of AD Initiation	Share of Total AD	No. of AD Initiation	Share of Total AD
India	40	0.2128	23	0.2018
Australia	24	0.1277	14	0.1228
European Union	21	0.1117	17	0.1491
United States	14	0.0745	6	0.0526
Turkey	12	0.0638	8	0.0702
Brazil	10	0.0532	1	0.0088
Malaysia	9	0.0479	0	0.0000
New Zealand	9	0.0479	4	0.0351
Argentina	7	0.0372	3	0.0263
Indonesia	7	0.0372	8	0.0702
Pakistan	6	0.0319	3	0.0263
Korea, Republic of	5	0.0266	6	0.0526
South Africa	5	0.0266	8	0.0702
China	4	0.0213	4	0.0351
Egypt	4	0.0213	1	0.0088
Canada	3	0.0160	2	0.0175
Philippines	2	0.0106	2	0.0175
Trinidad and Tobago	2	0.0106	0	0.0000
Colombia	1	0.0053	1	0.0088
Jamaica	1	0.0053	0	0.0000
Taipei, Chinese	1	0.0053	1	0.0088
Venezuela, Bolivarian Republic of	1	0.0053	0	0.0000
Thailand	0	0.0000	2	0.0175
Total	188	1.0000	114	1.0000

Source: WTO, 2014

On the other hand, statistically significant evidence of trade depression, a decrease of Thailand's exports to the third targeted country, is observed only under the U.S. AD policy in the year following the AD hit on the third country, whereas there are no evidence of trade depression associated with the two remaining imposing-policy countries. The empirical results found in this paper contribute to one useful insight on trade effects of AD measures on Thailand, representing one of the developing countries, which have not been strongly emphasized in the existing strand of literatures.

The rest of this paper is structured as follows. Chapter 2 presents data and discusses empirical methodology. Chapter 3 reports the empirical results and their implications. Finally, chapter 4 concludes.

1.2 Literature Review

The imposition of AD policy has been one of the most debatable research strands in international trade. The spread of AD protection policy which is not limited to only traditional industrial users but also among new users in the developing countries has led to several active studies in this research area. The discussion ranging from direct effects of the policy to indirect effects on international trade flows. AD measure has become one of the most relevant forms of protection that has been widely used as it is argued by Prusa (2001) to be an extremely flexible and timely trade instrument. Align with intuitive expectation, Prusa (2001) empirically shows the most direct effect of AD investigations which lead to a significant impact on import trade, regardless of whether duties are officially levied. The value of imports from named countries in the AD petition declines by 50-70% over the first three years of protection, and the imports still fall by 15-20% even if the petition is rejected.

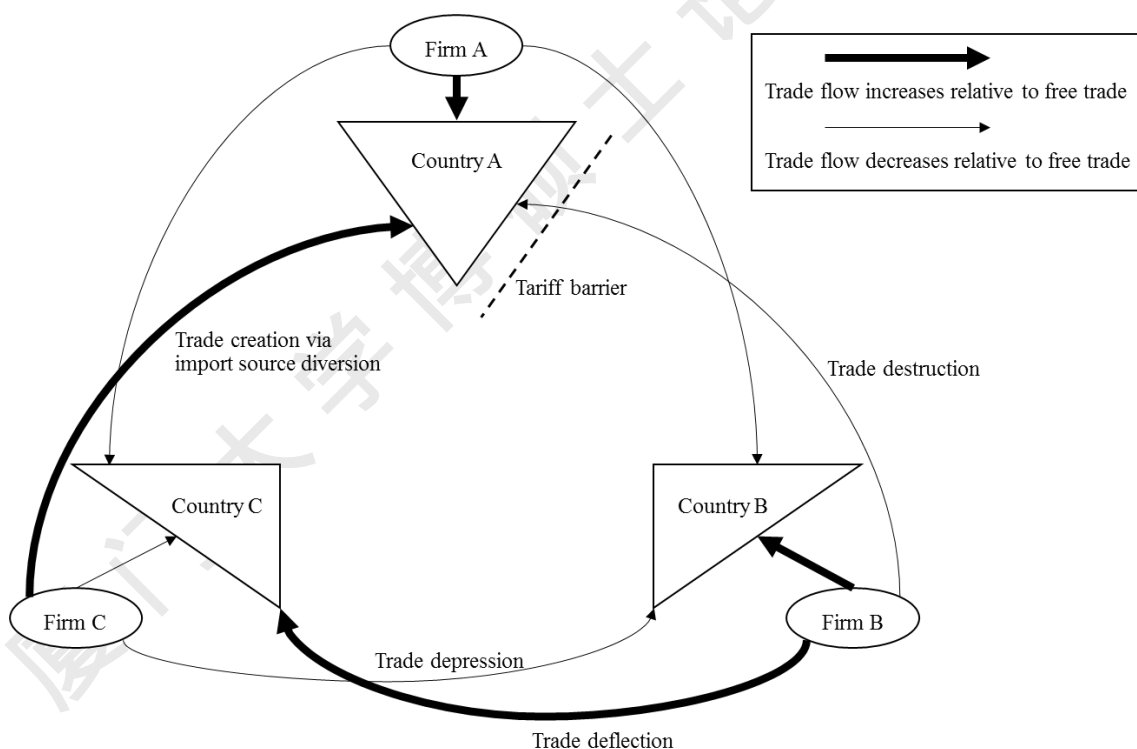
Despite a rising trend in the use of AD measure, there may not be an adequate consideration on how this measure could have side-effects beyond what it is aimed to implement for. The effect of AD may not only limited to country imposing the policy and targeted country, but also on country not-named in the import restriction policy. Several existing studies show the effect of import restriction policy from the point of view of large developed countries imposing the restriction inducing trade diversion from non-named countries. As pointed out by Prusa (1997), AD protection imposed by the U.S. causes substantial import diversion from non-named countries while aiming to reduce imports from named countries. It is also revealed that the larger the estimated duty, the larger the amount of diversion which also applies when the case is rejected. Consistent with trade diversion effects in the U.S., the finding conducted by Konings et al. (2001) shows that import diversion from non-named countries can be observed under EU AD action but at a lesser extent than that of the U.S. Hence, the costs of AD is not only limited to the policy-imposing or targeted country but also includes the change occurred from the involvement of the non-named countries in the trade pattern as well.

Another strand of existing literatures examines the impact of AD policy from the perspective of the country targeted by the restriction. There are several literatures investigating the effect of import restriction on trade flow to the third countries. An excellent paper by Bown and Crowley (2007) presents an interesting 'three-country model' which illustrates a change in trade flow among countries when one of the countries changes its trade restriction policy.

Bown and Crowley (2007) found that Japanese export flow is deflected and depressed to the third countries in a response to U.S. import restricting trade policy. The extent of deflection and depression of Japanese export vary largely across importing countries. Their study shows an evidence of strong trade deflection to the next best alternative market, EU and South Korea, which are the next largest destination markets for Japanese exports after the U.S. Consistent with results of Bown and Crowley (2007), Durling and Prusa's (2006) investigation also found evidence of trade deflection in the global exports of the hot rolled steel market, which is known to be the dominant sector in the filing of AD disputes.

The empirical analysis in this paper is therefore motivated by this theory proposed by Bown and Crowley (2007) in identifying the impact of AD policy reflecting through trade deflection and trade depression. Figure 1 illustrates an effect on trade flows of the countries involved in an imposition of AD measures.

Figure 1: Trade Flows under an AD Measure



Source: Bown and Crowley, 2007

When country A imposes AD duty against Thailand (country B) and impose no country-specific tariff against country C, the model predicts trade deflection which is an increase in exports from Thailand to country C. On the other hand, when country A imposes AD duty

against country C and impose no country-specific tariff on Thailand, trade depression is expected which is a fall in exports from Thailand to country C because country C's export that are diverted away from country A will be sold domestically depressing exports from Thailand. Beyond focus of empirical investigation in this paper, the model also predicts trade destruction which is a fall in country A's imports from country B when country A imposes import tariff against country B. Lastly, the model predicts trade creation through import source diversion, or shortly known as trade diversion, that is a rise in country C's exports to country A. By taking into account the effect of trade flows to the third countries, true cost of the AD policy can be properly evaluated especially in the light of a rise in AD proliferation.

While the frequent use of AD by developed countries has been the subject of extensive research, there are only a few studies conducted on developing countries. Cuyvers and Dumont (2004) study the direct effect of AD duties levied by EU against imports from Association of Southeast Asian Nations (ASEAN)² in the 1990s. Their research shows that both value and volume of EU imports from targeted ASEAN countries substantially fall. A 10% AD duty levied by the EU lead to a decrease in import from ASEAN countries by 1-3% in one year after the imposition. Besides from the studies on direct effect of AD policy, the implication of AD on developing countries is still vaguely understood despite the fact that developing countries are recently not only potential targets but also users of AD policy themselves. Developing countries are no longer targeted by developed countries but also by other developing countries in the discriminatory AD measures. As reported by Moore and Zanardi (2009), developing countries, which are considered to be new users of AD policy, target other developing countries in roughly 60% of their initiated AD case.

While existing studies generally focus on proliferate use of AD policy by developing countries as well as the direct impact of AD measure on developing country, it is also interesting to examine the full impact of AD policy on the developing countries when they are the target of AD themselves. In the face of discriminatory AD restriction, developing countries may react differently from developed countries due to their ability to deflect trade and adjust their export to alternative markets. This leaves a niche to be filled in for this paper and contributes more to this strand of literature. Focusing on the shrimp export markets and an impact on international price, a study by Debaere (2010) founds that developing countries, notably Thailand, Vietnam, China, India, Ecuador and Indonesia, have shifted their exports away from Europe markets

² Thailand, Malaysia, Singapore, Indonesia, Philippines, Brunei Darussalam, Cambodia, Laos, Myanmar, Vietnam.

towards the U.S. when EU discriminatorily revokes Generalized System of Preferences (GSP) status from Thailand exporters. However, another existing research by Brambilla et al. (2012) points out the opposite response of developing country in a face of discriminatory restriction. Brambilla et al. (2012) studies the microeconomic impacts of U.S. AD duties on Vietnamese catfish at a disaggregated level. Due to the inability in deflecting exports to alternative markets, income growth is significantly slower among households involved in catfish farming in a face of heavy tariffs on the industry. One interesting question that can be raised from these studies is that what would be an impact on Thailand's economy, whose growth is largely attributed by export sector, if Thailand is not able to shift its export to alternative markets when facing such kind of discriminatory import restrictions.

Instead of just focusing on one specific sector, this paper makes use of an extended data of top Thailand's export to examine the effect of AD restriction over a relatively long time horizon to reach general conclusions. In term of empirical methodology, this paper is largely based on the approach conducted by Bown and Crowley (2010) in using augmented gravity model and applies difference-in-difference approach in identifying trade deflection and trade depression effect in a response to discriminatory import restrictions. Bown and Crowley (2010) finds that there is no systematic evidence of Chinese export deflecting to the third countries when facing with import restrictions imposed by US and EU during China's pre-WTO accession period. In contrast, EU and US trade restrictions may surprisingly have had a chilling effect on China's exports to third market. This paper is different from Bown and Crowley (2010) as the purpose of this paper is to analyze an impact of import restrictions imposed by Thailand's top trading partners, notably U.S., EU, Australia and India, on Thailand's export flows. This finding will provide a useful insight on an ability of Thailand, as developing country, in deflecting and depressing trade to alternative markets. As two existing studies has shown, unlike Japan which is a developed country, a developing country with rapid growth like China did not deflect steel exports when it faced with U.S. AD measures. Developing country exporters may incur an extra cost as a result of AD restriction if they fail to deflect trade and gain back some of their losses (Bown and Crowley 2010). Hence, the results in this paper have important implications to developing countries, Thailand in particular, given the rapid increase in AD policy imposition by both developed countries and developing countries themselves.

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