2021, Volume 44, Issue 88, 23-44 / ISSN 2304-4306

E C O N O M Í A

revistas.pucp.edu.pe/economia

www.fondoeditorial.pucp.edu.pe

Do Preferential Trade Agreements Favor the Liberalization of Trade with Non-Members? The Case of the Andean Community

Lakshmi Isabel Castillo Thorne[a]

[a]Pontifical Catholic University of Peru, Lima, Peru

✉ lakshmi.castillo@pucp.pe

Abstract

The theoretical literature has not reached a consensus on the effect of preferential trade agreements (PTAs) on multilateral liberalization. Empirical studies on this topic have been limited and, like theoretical studies, yield varying results. This study seeks to identify the effect of the Andean Community of Nations (CAN) on Peru's multilateral trade liberalization by analyzing the variation in Most Favored Nation (MFN) tariffs imposed on non-members as a consequence of preferential tariff reductions for PTA members. The units of analysis are tariff lines disaggregated to 6 digits in the Harmonized System for 1992–2010. The results show that, for the entire period, the CAN generated a building block. We divided the sample into two sub-periods: 1992–2001 and 2002–2010. For the former the results show a building block effect, while for the latter they suggest the formation of a stumbling block. Other variables are also considered, such as preferential imports, as a sizeable preferential margin may reduce MFN tariffs for the entire sample. Based on these results, we find that the CAN did not hinder Peru's multilateral liberalization.

Article History: Received: November 7 2020 / Revised: August 20 2020 / Accepted: March 30 2021

Keywords: Preferential Trade Agreement (PTA); Peru; Andean Community

JEL Classification: F13, F15

https://doi.org/10.18800/economia.202102.002

1. Introduction

Over the last 25 years there has been an exponential increase in Preferential Trade Agreements (PTAs). By 2020, there were 305 PTAs in force between Free Trade Zones (FTZs) and Customs Unions (CUs). This accelerated growth raised a concern on whether PTAs favor global market integration or create an incentive to form closed trade blocs.

The theoretical literature has not reached a consensus on the effect of PTAs on multilateral liberalization. Authors such as Bagwell and Staiger (1999) find that, due to a complementarity effect, external tariffs tend to decrease as a consequence of PTAs. However, other authors like Panagariya and Findlay (1994) show that sectors that are constrained due to preferential imports perform lobbying activities to increase external tariffs. The decrease in Most Favored Nation (MFN) tariffs as a consequence of reductions in preferential tariffs is known as a "building block" effect; the increase (or smaller decrease) in MFN tariffs as a response to changes in preferential tariffs is known as a "stumbling block" effect. Empirical studies on this topic have been limited and, like theoretical studies, yield varying results. This study seeks to identify the effect of the Andean Community of Nations (CAN) on Peru's multilateral trade liberalization by analyzing the changes in MFN tariffs levied on non-members as a consequence of preferential tariff reductions for other CAN members.

The CAN agreement was signed in 1969 by Bolivia, Chile, Colombia, Ecuador, and Peru. Venezuela joined the group in 1993 and later withdrew in 2006, as did Chile in 1973. This PTA, one of the oldest in Latin America, shows some particularities, such as the non-compliance of the original tariff reduction schedule, which led to its repeal and the creation of a new one in order to successfully complete the FTZ.

The introduction of preferential tariffs presented some difficulties in this study due to the age of the trade agreement and the lack of information prior to 1993. Therefore, we did an in-depth research of tariff liberalization in Peru under the CAN. Initially we identified and digitalized Peru's MFN tariffs for 1991. Based on the latter, we used the tariff reduction schedules to construct the preferential tariffs levied by Peru. We expect the construction of this database to become a contribution to future CAN research.

We use an econometric model similar to that proposed by Tovar (2012). The estimation methods used are Ordinary Least Squares (OLS) and, for the cases where instrumental variables are included, Two-Stage Least Square (2SLS) and the Generalized Method of Moments (GMM). The units of analysis are tariff lines disaggregated to 6 digits in the Harmonized System (HS) for 1992–2010.

The results indicate that the CAN was a building block for Peru. The sample was divided into two sub-periods, 1992–2001 and 2002–2010. We find that, for the former, the results show, again, the presence of a building block. However, for the latter, they change, suggesting a stumbling block. Other variables are also added to analyze their effect on changes in external tariffs, such as preferential imports, which we find to cause a reduction in MFN tariffs when preferential margins are sizeable. According to these results, it can be inferred that the CAN did not hinder Peru's multilateral liberalization.

This study is divided as follows. The next section summarizes Peru's history within the CAN. Section 3 presents a review of the theoretical and empirical literature. Sections 4 and 5 describe the econometric specification and the data used, respectively. The last two sections present the results and conclusions.

2. Peru and the CAN

Peru is part of the CAN, previously called the Andean Pact, since its creation in 1969 under the Cartagena Agreement. This PTA was meant to be a CU, but Peru never adopted the common external tariff (CET). The agreement also involved completing an FTZ by 1980. For this purpose, a tariff reduction schedule was established where the entire universe of products was divided into four groups with their own tariff reduction schedules. However, due to non-compliance issues, only 17% of products were duty-free by 1975. After various failed attempts to complete the FTZ during the 1980s, CAN Decision 301 of 1990 created a new schedule establishing that the FTZ would be completed by 1995. The new tariff reduction schedule was applied based on the MFN tariffs of each country, as indicated in Article 4 of the Decision: "The reduction applied by the Member Countries until December 31, 1991 will be made on the national taxes in force at the date of entry into force of this Decision" (Commission of the Cartagena Agreement, 1991). This Decision was complemented in August 1992 by Decision 324, which indicated a particular schedule for each country regarding the liberalization of their lists of exceptions, with an aim to complete the FTZ by 1995. Peru was not included in the Decision. As a result of the new accelerated schedule, an FTZ was formed between Bolivia, Colombia, Ecuador, and Venezuela in 1995.

Peru failed to adopt the measures set forth in Decision 301 and withdrew from the trade agreement through Decision 321, which indicated that "Peru will suspend its obligations with respect to the Liberalization Program and the Common Minimum External Tariff until 31 December 1993" (Commission of the Cartagena Agreement, 1992). This Decision also indicated that Peru was allowed to establish bilateral trade agreements with other CAN members during the suspension period.

Based on this Decision, Peru signed bilateral trade agreements with Bolivia, Colombia, and Ecuador, which entered into force in 1993 until Peru's return to the FTZ. These agreements automatically liberalized a total of 570 tariff items upon entry into force.

Peru's reincorporation was postponed by various Decisions until 1997 when, through Decision 414, Peru gradually reentered the FTZ Commission of the Cartagena Agreement. Peru's reincorporation involved a tariff reduction schedule whereby the products that had not been liberalized were divided into eight annexes. This new schedule established that by end-2005 all products would be completely duty-free. In the first four years of this new schedule, 85% of all items were fully liberalized. By 2005, Peru finished liberalizing all items and the FTZ was completed.

3. Literature

The theoretical literature has not reached a consensus on what is the effect of these trade agreements on multilateral trade liberalization. Some authors suggest that preferential liberalization reduces external tariffs imposed on non-members, thereby generating a building block. Other authors suggest a negative effect of trade agreements on liberalization with non-members, indicating that MFN tariffs increase or decrease to a lesser extent relative to preferential tariffs, thereby generating a stumbling block.

For example, Bagwell and Staiger (1999) identify three effects of PTAs on external tariffs. The first is the "tariff complementarity effect", whereby the reduction of preferential tariffs provides an incentive to reduce external tariffs (building block). The second is the "punishment effect", which weakens multilateral liberalization, since PTAs encourage an increase in external tariffs. Finally, the third is a "discrimination effect", whereby external tariffs are raised to avoid "free ridding" by non-members. Other authors addressing the effect of tariff complementarity are Freund (2000), who uses an oligopoly model, and Bond et al. (2013), who find that as a result of PTAs, and if tariffs in the rest of the world are kept constant, members of a trade agreement will tend to reduce their external tariffs. Additionally, authors like Richardson (1993) use a multisectoral model where protection is endogenously determined, concluding that when a PTA is formed, not only will there be trade liberalization among members, but tariffs imposed on non-members will also decrease. Ornelas (2005) proposes a model with a government welfare function reflecting both political and economic interests, which shows that a PTA may induce members to reduce their tariffs on non-members.

However, other authors show that PTAs may lead to increases in external tariffs on non-members. Panagariya and Findlay (1994) show that the introduction of preferential trade increases the level of protection towards non-members, as the workforce that previously lobbied against PTAs will now lobby to maintain high external tariffs.

Krishna (1998) considers that trade policy is determined by lobbying interest groups. This study uses a political economy model with oligopoly to show that the greater the commercial deviation created by a PTA, the greater the tendency for multilateral liberalization not to take place. Cadot et al. (1999) compare FTZs and CUs with different levels of political and economic integration. They conclude that at least one member of the agreement will be prompted to raise external tariffs in the general equilibrium, as certain industries competing with preferential imports will contract, thereby generating a reduction in employment. This new unemployed labor force will shift to the sectors that compete with imports from non-members, causing them to expand and enabling them to lobby for an increase in tariffs on the goods they produce.

Limão (2007) uses a model that includes PTA non-trade issues, such as working conditions and environmental plans. The study shows that, if the preferential margins given to members are lowered due a reduction in external tariffs, there will be a decrease in the level of cooperation in non-trade issues. Tovar (2014) uses a political economy model with endogenous protection to show that, if there is loss aversion in individual preferences, or if the government function has diminishing returns with respect to political support, a PTA could have a stumbling block effect

with non-members.

As mentioned above, there have not been many empirical studies about this topic and, like the theoretical literature, a consensus has not been reached on the effects of PTAs on trade liberalization. Authors such as Bohara et al. (2004) assess Argentina's imports from Brazil under the Mercosur agreement. They find that, for industries that experienced trade deviation due to preferential imports, their external tariffs with non-members were reduced. Estevadeordal et al. (2008) find that PTAs in Latin American countries tend to form building blocks in trade liberalization with non-members. The study also finds that MFN tariffs are lowered the most in sectors where PTA partners are major suppliers.

Calvo-Pardo et al. (2011) show how the ASEAN free trade agreement has affected foreign trade and tariffs on non-members. It should be noted that this study, unlike others, uses as an instrumental variable for preferential tariffs (effectively applied) the preferential tariffs that should have been levied according to the tariff reduction schedule of the initial trade agreement. These tariffs were not effectively enforced due to the peculiarities of the trade agreement. The results are similar to the ones obtained by Estevadeordal et al. (2008); i.e., regional integration has a building block effect. Limão (2006) studies the case of the U.S. under the Uruguay Round, identifying a reduction in U.S. multilateral tariffs. This reduction was relatively lower for products imported under preferential tariffs than for products that were not imported under a PTA. The study by Ketterer et al. (2014) for Japan is similar to the one carried out by Limão (2006). They use tariff data from the Uruguay Round, but at a 6-digit HS level of product disaggregation. The results obtained suggest that trade preferences may have had a stumbling block effect in liberalizing Japan's external tariffs during the last successful multilateral trade round. Ketterer et al. (2015) did a similar study for the Canada-U.S. Free Trade Agreement (CUSFTA), finding that this PTA generated a building block in Canada's multilateral tariff reductions during the Uruguay Round. Karacaovali and Limão (2005) find a similar stumbling block result for the European Union (EU). Tovar (2012) performs a similar analysis as Estevadeordal et al. (2008) for the Dominican Republic-Central America FTA (CAFTA-DR), finding that the PTA initially had a stumbling block effect on trade liberalization and then became a building block in the last year.

4. Methodology

In order to study the CAN effect on Peru's multilateral liberalization with non-members, the relationship between the reduction of preferential and external tariffs in Peru must be modeled. Using a methodology similar to the one used by Tovar (2012), the equation to be estimated is:

$$\Delta \text{ MFN Tariff} = \alpha_I + \alpha_t + \beta \Delta PrefTariff_{it-1} + \theta X_{it} + \varepsilon_{it} \quad (1)$$

- Δ MFN Tariff:[1] Change in Peru's MFN tariff on product i for years $t-1$ to t.
- $\Delta PrefTariff_{it-1}$:[2] Change in Peru's preferential tariff on product i imported from a CAN member for years $t-2$ to $t-1$.
- α_I: Fixed effect by industry.
- α_t: Time fixed effect.
- ε_{it}: Error term.

The change in preferential tariffs ($\Delta PrefTariff_{it-1}$) is lagged one period to reduce the possibility of endogeneity, and also because these preferential tariffs are predetermined relative to MFN tariffs, which may react with a lag. (Estevadeordal et al., 2008). Additionally, Calvo-Pardo et al. (2011) point out that lagging preferential tariffs also rule out the possibility of omitted variables that may affect MFN and preferential tariffs in the same time period.

The model may also present a double causality problem since, as mentioned above, preferential tariffs are constructed from MFN tariffs; and changes in the latter could influence tariff preferences applied by Peru. To solve endogeneity, preferential tariffs are instrumentalized using the preferential tariffs that Peru would have applied if it had not withdrawn from the FTZ. This variable is built using the original CAN schedule. Like Calvo-Pardo et al. (2011) in their research for the ASEAN trade agreement, our data shows the peculiarity that the tariffs that were effectively applied were not those that were initially negotiated in the creation of the trade agreement. This was due to the fact that the ASEAN member countries did not comply with the initially negotiated reduction schedule and this had to be corrected and modified repeatedly, a feature that was also present in the CAN, as discussed in Section 3.

We include fixed effects to control different types of unobservable heterogeneity, like industry-fixed effect α_I, to capture any decision by Peru to protect or liberalize a specific sector. We also added time-fixed effects α_t.

The coefficient of interest in this econometric model is β; i.e., $\beta > 0$ indicates that the CAN was a "building block" for Peru's multilateral liberalization since, as a consequence of the reduction of its preferential tariffs, Peru also reduced its external tariffs. On the contrary, if $\beta < 0$, the CAN was a "stumbling block" for Peru's multilateral liberalization as, due to the reduction of preferential tariffs, external tariffs increased or decreased less.

As Calvo-Pardo et al. (2011) show, for countries to have access to preferential tariffs they must comply with certain rules of origin, which have an administrative cost. If the margin between preferential and MFN tariffs is very small, member countries would likely prefer to use the MFN tariffs for their products and thus avoid the administrative costs of applying the rules of origin. On the other hand, theory also indicates that the impact on external tariffs will be greater for products with a greater participation in intra-bloc trade. To analyze this possible

[1] We do not consider products for which MFN tariffs are initially zero, since preferential tariffs then take the same value, potentially causing a bias.

[2] A manual construction of this variable is carried out by applying the tariff reduction schedule to the MFN tariffs.

effect of preferential margins and imports on external tariffs, these variables are used as part of X_{it} in equation (1):

$$\Delta \text{ MFN Tariff}_{it} = \alpha_I + \alpha_t + \theta(MarginIndex_{it} * PrefImport_i) + \varepsilon_{it} \quad (2)$$

- $MarginIndex_{it}$: Dummy variable that takes the value of 1 if the preferential margin is higher than 2.5 and zero otherwise, for product i in year t.
- $PrefImport_i$:[3] Share of CAN imports in Peru's total imports for product i.

If $\theta > 0$ we would have a "tariff substitutability" effect, which indicates that for products that present a considerable margin and a high volume of preferential imports, their external tariffs will tend to increase. On the contrary, if $\theta < 0$, there would be a "tariff complementarity" effect.

Another variable included in the X_{it} vector is the binding indicator, which takes the value of 1 if the "tariff overhang" is less than 3 and zero otherwise. The tariff overhang is the difference between the bound tariff and the MFN tariff. The coefficient of this variable is expected to be negative, as a higher binding indicator leads to lower increases in MFN tariffs. We also added as explanatory variable the preferential margin, which is the difference between MFN and preferential tariffs, instead of preferential tariffs, to analyze whether external tariffs on products with a higher preferential margin increase or decrease, thus providing further proof of the relationship between MFN tariff changes and preferential tariffs.

Finally, export concentration variables will be added since, as mentioned by Tovar (2012), there are studies, such as the one by Ludema and Mayda (2009), where these variables have an effect on MFN tariffs. In cases where there is a high concentration of countries exporting a given product, there is a greater interest on the part of the exporting country in negotiating tariff reductions, which is why these will be lower. Additionally, a high concentration could cause a "punishment effect" if the importing country increases its tariffs. In the case of products with a large number of export destinations and a certain level of concentration, the exporting country would be under more pressure not to increase its tariffs. For these reasons, the variation in the Herfindahl concentration index by product and the variation in the number of exporters are included as regressors.

The estimation methods are ordinary least squares (OLS), two-stage least squares (2OLS), and the generalized method of moments (GMM).

5. Data

Our estimation is based on data for Peru at 6-digit HS level for 1991–2010. Peru has been a CAN member since 1969, but due to data availability issues we are only able to use data for t=1992–2010.[4] We chose 2010 as the cut-off date because, although the FTZ was completed in 2005, as mentioned above, the preferential tariffs may cause changes in MFN tariffs with some delay, and in Peru's case considerable changes took place until 2010.

[3] Due to data availability, we used preferential imports from 1993.

[4] The first-year of variation in tariffs will be the change between 1991 and 1992.

The MFN tariff for 1991 was obtained from Peru's Ministry of Economy and Finance (MEF).[5] The MFN[6] tariffs for the rest of the years were obtained from World Integrated Trade Solutions (WITS). These are converted to H0 version using WITS[7] correlation tables.

Similar studies build preferential tariffs applying the tariff schedule to the MFN tariffs from the first year the agreement entered into force. However, given that the CAN entered into force in the late 1960s, this information is not available. For Peru, MFN tariff information is available in digital format since 1993. This year could not be used as a base for applying the tariff reduction schedule, because at that time different schedules were being applied. To find a solution, we examined CAN decisions and schedules carefully, and found that the CAN applied a tariff liberalization schedule until 1975 for 17% of the products. In addition, the tariff schedules that were supposed to be applied for the following years were repealed until 1991, when a new tariff reduction schedule was effectively applied, as detailed in Section 3.

For this reason, it was necessary to obtain Peru's MFN tariffs for 1991, which were provided by the Ministry of Economy and Finance (MEF) and digitalized manually as a contribution to research in this field. Using this tariff as a base, the preferential tariffs for the 17% of products that were completely liberalized since the 1970s where assigned a value of zero. For the other 83% of products, the tariff elimination schedule of bilateral trade agreements and the new schedule introduced when Peru reentered the FTZ were applied. Additional variables like preferential imports, bound tariffs, number of exports, and the Herfindahl index by export product, are extracted from WITS.

Table 1 shows a statistical summary of the variables used. The average MFN tariff variation is -1.28, with annual reductions of up to -20 percentage points by product. The average change in preferential tariffs is -1.14 and, for some products, there were tariff reductions of up to -50 percentage points in one year. Given data availability, the percentage of preferential imports are from 1992; and the variation of the number of exporters and the HH index are for 1992–1993.

Table 1
Statistical summary.

Variable	Average	Standard Deviation	Min.	Max.	Observations
Δ MFN Tariff	-1.28	3.11	-20.00	10.00	92,720
Δ Preferencial Tariff	-1.14	3.89	-50.00	0.00	92,720
Import share	0.06	0.17	0.00	1.00	87,840
Preferential margin indicator	0.80	0.40	0.00	1.00	87,840
Binding indicator	0.98	0.14	0.00	1.00	87,840
Δ N. exporter	0.26	3.44	-55.00	39.00	87,840
Δ Herfindahl exports	0.00	0.06	-0.07	0.30	87,840

[5]These were in NANDINA nomenclature at 8-digit HS level, from which we used the first 6 digits. For cases where there is more than one tariff line with the same first 6-digits, a simple average was used as MFN tariff.

[6]MFN tariff information for Peru is not available for 1992, 1994, and 1996. The latter were calculated as simple averages of the data for 1991–1993, 1993–1995, and 1995–1997 respectively.

[7]See http://wits.worldbank.org/WITS/WITS/Support%20Materials/CMTNomenclatureandConcordancesList.aspx?Page=ProductNomenclatureandConcordances.

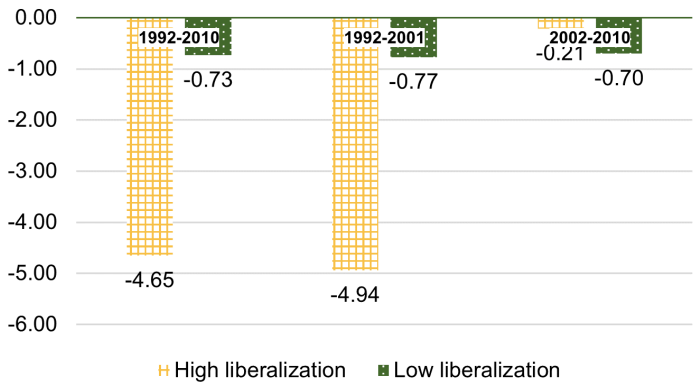


Figure 1. Average change in MFN tariffs for products with high and low preferential tariff reductions.

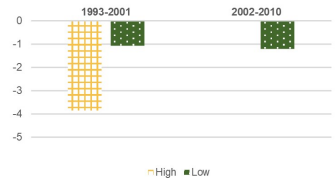
Figure 1 shows the average changes of MFN tariffs for high and low preferential liberalization. High preferential liberalization products are those for which the average preferential tariff reduction is greater than its median, in absolute value. For the entire sample, high liberalization products had their MFN tariffs reduced by -4.65 percentage points. This indicates that the products for which preferential tariffs were liberalized the most as a consequence of the CAN trade agreement, also had their external tariffs liberalized to a greater extent. When performing the same exercise for the first part of the sample we found similar results. However, for the last 10 years, high-liberalization products had their MFN tariffs reduced less than low-liberalization ones. Figure 2 shows the same exercise as Figure 1 for 1992–2001 and 2002–2010 by sector. It indicates that, for most sectors, during the first period products for which preferential tariffs were liberalized the most as a consequence of the CAN trade agreement also had their external tariffs liberalized to a greater extent; and that, for the last period, high-liberalization products had their MFN tariffs reduced less than low-liberalization ones.

Based on these two exercises, the hypothesis proposed is that, for the entire sample and the first 10 years, there could be a building block, while for the second half there could be evidence of a small stumbling block. The same hypothesis is proposed for the estimations by sector. We will seek to prove this hypothesis in the next sections.

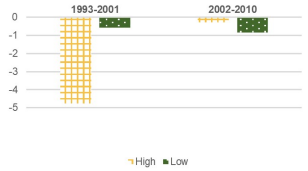
6. Results

6.1 Baseline Specifications

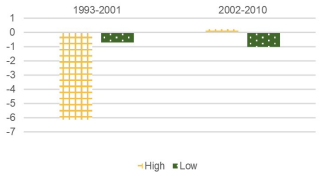
Table 2 shows the results of the econometric model estimation including only, as explanatory variable, the preferential tariff variation lagged one period. The estimation includes temporary industry (HS2) and year-industry fixed effects. Columns (1a)-(1c) are estimated using OLS. In column (1a), the coefficient of interest (β in equation (1)) is positive and significant at the 1% level, indicating that a 1% reduction in preferential tariffs causes a reduction of 0.24 percentage points in MFN tariffs. In columns (1b) and (1c) the same estimation is replicated for 1992–2001 and 2002–2010, respectively. For 1992–2001, the β coefficient continues to be positive and significant at the 1% level; for 2002–2010 the coefficient is negative and significant at the 1% level



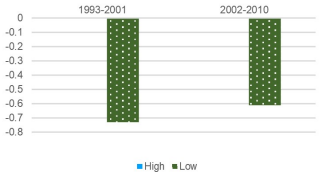
(a) 01-05 Live animals.



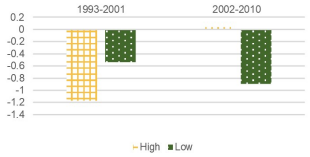
(b) 08-15 Vegetable.



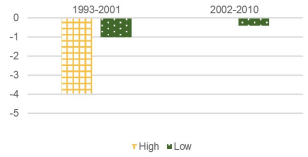
(c) 16-24 Edible products.



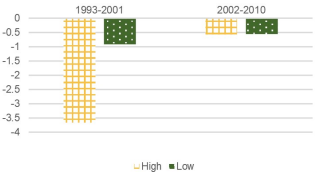
(d) 25-26 Minerals.



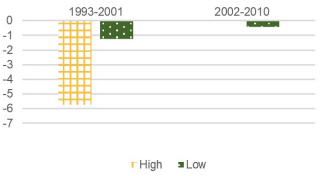
(e) 27 Fuels.



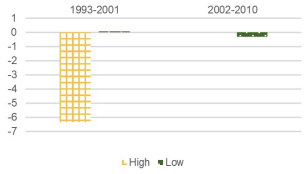
(f) 28-38 Chemicals.



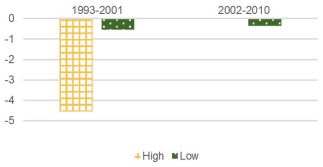
(g) 39-40 Plastic or Rubber.



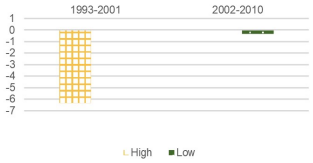
(h) 41-43 Hides and Skins.



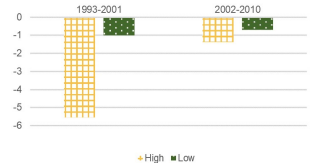
(i) 44-49 Wood.



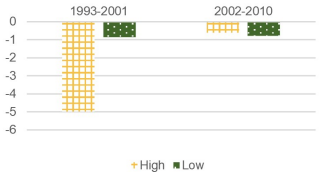
(j) 50-63 Textiles and Clothing.



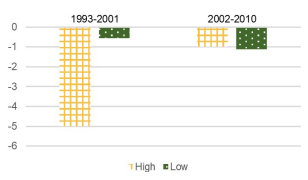
(k) 64-67 Footwear.



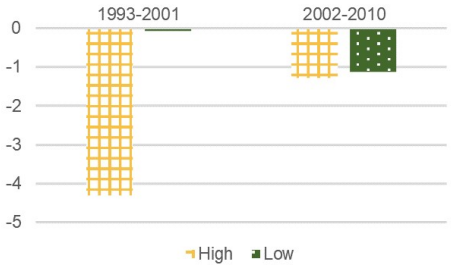
(l) 68-71 Stone and Glass.



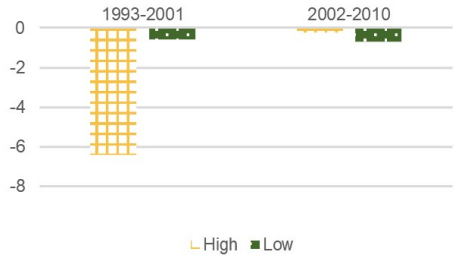
(m) 72-83 Metals.



(n) 84-85 Machinery / Electrical.



(o) 86-89 Transportation.



(p) 90-99 Miscellaneous.

Figure 2. Average change in MFN tariffs for products with high and low preferential tariff reductions for 1992–2001 and 2002–2010, by sector.

Table 2

Effect of preferential tariff changes on MFN tariff changes.

Dependent variable: Δ MFN tariff									
	(1a) 1992–2010	(1b) 1992–2001	(1c) 2002–2010	(2a)[a] 1992–2010	(2b)[a] 1992–2001	(2c)[a] 2002–2010	(3a[b]) 1992–2010	(3b)[b] 1992–2001	(3c)[b] 2002–2010
Δ Preferential tariff	0.242***	0.233***	-0.109***	0.273***	0.260***	-0.311***	0.206***	0.216***	-0.256***
	[0.002]	[0.002]	[0.022]	[0.003]	[0.003]	[0.441]	[0.007]	[0.009]	[0.032]
Constant	-5.303	-6.091	-0.297	-5.147	-5.983	-0.247	-5.876	-7.116	-0.252
	[0.170]	[0.238]	[0.147]	[0.170]	[0.238]	[0.147]	[0.389]	[0.502]	[0.188]
Fixed effects	Year,HS2, Year-HS2	Year,HS2, Year-HS2	Year,HS2, Year-HS2	Year,HS2, Year-HS2	Year,HS2, Year-HS2	Year,HS2, Year-HS2	Year,HS2, Year-HS2	Year,HS2, Year-HS2	Year,HS2, Year-HS2
Observations	92,720	48,800	43,920	92,720	48,800	43,920	92,717	48,797	43,920
R-squared	0.617	0.643	0.499	0.616	0.643	0.498	0.613	0.639	0.498

Notes: Robust standard errors in brackets. * significant at 10%; ** significant at 5%; *** significant at 1%.

[a]This regression uses 2SLS.

[b]This regression uses IV-GMM.

as well. These results indicate the existence of a building block in the first half of the sample and a stumbling block in the second half, generating a reduction of 0.23 percentage points in MFN tariffs in the first years and an increase of 0.10 percentage points in MFN tariffs in the second half, given a 1% reduction in preferential tariffs.

As mentioned above, there could be an endogeneity problem, as confirmed by the Hausman test presented in Table A.1. To solve it, we instrumentalize the variable for changes in effectively applied preferential tariffs using the changes in preferential tariffs that would have occurred if the original tariff reduction schedule had been enforced.[8] We also performed a relevance test to ensure the quality of these instruments.[9] The partial R-square of the first stage in column (2a) of Table 2 is 0.508. The F-test rejects the hypothesis that the excluded variables are equal to zero and significant at the 1% level, as well as the hypothesis that the instruments are weak at the 5% level for estimations from (2a) to (2c).

The parameters estimated using these instruments for the entire sample (2a) are similar to the ones estimated using OLS where there is a building block. For the first half (2b), a building block is identified again, where a 1% reduction in the preferential tariff reduces MFN tariffs by 0.26 percentage points. For the second half, the results are consistent with the latter, where there is a stumbling block, as a 1% reduction in preferential tariffs increases MFN tariffs by 0.31 percentage points.

Following the methodology used by Calvo-Pardo et al. (2011), columns (3a)-(3c)[10] use as instruments the lags of effectively applied preferential tariffs; and the estimations are carried out using the IV-MGM method. The F-test rejects the hypothesis that the excluded instruments are zero at the 1% significance level; Stock and Yogo's test rejects that the instruments are weak at a 5% significance level; Hansen's J test indicates that instruments are valid and correctly excluded from the equation for the estimations in columns (3a)-(3c) of Table 2. For 1992–2001, a 1% reduction in preferential tariffs reduces MFN tariffs by 0.22 percentage points; and for 2002–2010 they cause an increase of 0.26 percentage points. These results are consistent with the OLS estimations in columns (1a)-(1c) and the 2SLS estimations in columns (2a)-(2c).

When using the standardized coefficients for 1992–2001 in column (3b), an increase of one standard deviation in the reduction of preferential tariffs causes a reduction of 0.29 percentage points in MFN tariffs. This is considered to be a significant impact, as the median of MFN tariffs for this period is 15%. For 2002–2010, the standardized coefficient shows that an increase of one standard deviation in the reduction of preferential tariffs generates an increase of 0.05 percentage points in MFN tariffs. Although this impact is smaller, the median of MFN tariffs for these years was 9%, and therefore it is still a considerable effect. For these reasons, it can be inferred that the results are economically significant.

These results are consistent with the hypothesis based on the average changes of MFN tariffs for high- and low-liberalization products in Figure 1: a building block effect for the first 10 years, but a stumbling block effect for the second sub-period.

[8] This methodology replicates the one used by Calvo-Pardo et al. (2011).
[9] The first-stage results and tests are in Table A.1, columns (1a)-(1c).
[10] The first-stage results and tests are in Table A.1, columns (2a)-(2c).

6.2 Additional Results and Sensitivity Analysis

As mentioned in Section 4, variable X_{it} in equation (2) includes the interaction between preferential imports and the preferential margin index to measure its impact on Peru's external tariffs. This reveals whether PTA partners prefer to use MFN tariffs rather than preferential tariffs; and whether the preferential margin is so small that partners prefer to use the MFN tariffs to trade products, thereby avoiding the costs of complying with rules of origin established to access preferential tariffs.

Preferential imports can present an endogeneity problem with the variation of MFN tariffs. To avoid this problem, the imports used should be from a year before the study period. However, given data availability, the 1992 preferential imports were used and the period for these estimations was t=1993–2010 (columns (1a)-(1c) in Table 3). The coefficients are statistically significant and negative for (1a)-(1b). This means that, for the entire sample and the first sub-period, products with larger imports and a sizeable preferential margin had their MFN tariffs reduced, which is consistent with the previous results in Table 2, where a building block was found for the entire sample and for the first sub-period. For 2002–2010, the interaction of preferential imports and the preferential margin index is positive and significant at the 1% level. This means that products with higher preferential imports and a sizeable margin had their MFN tariffs increased, or reduced to a lesser extent, which supports the results in Table 2 of a stumbling block for 2002–2010.

This interaction is also estimated including preferential tariff variation, the preferential import share, and the preferential margin index separately in columns (2a)-(2c). By itself, the share of imports is not significant, indicating that only in the presence of sizeable preferential margins the preferential imports have an effect on external tariffs. The preferential margin index is negative and significant at the 1% level, which indicates that an increase in preferential margins generates a reduction in MFN tariffs. For 2002–2010 this variable is significant at 1% and presents a positive value.

Additionally, in columns (3a)-(3c) only the preferential margin is used. Given that this variable could present endogeneity problems with MFN tariff variations, it is instrumentalized using the preferential margins that were created using the original preferential tariff schedule. Results for the whole sample and 1992–2001 are positive and significant at the 1% level. These have a similar interpretation as the preferential margin index; i.e., that products with sizeable preferential margins have their MFN tariffs reduced. The preferential margin is not significant for 2002–2010 but presents a positive sign.

In Table 4, we include several variables to test the robustness of previous results; and use the IV-MGM method to carry out the estimations. Preferential tariffs preserve the same sign and significance as in Table 2, confirming a building block effect for the entire period and the first sub-period, and a stumbling block effect for the second half.

The bound tariff index is included to assess whether the bound tariffs imposed by the WTO had an effect on multilateral liberalization. This index, as mentioned in Section 4, is built using the bound surplus; i.e., the difference between the bound and MFN tariffs. If this surplus is greater than 2.5, it takes a value of 1, and zero otherwise. The tariff limits imposed by the WTO

Table 3

Effect of preferential tariff changes and import shares on MFN tariff changes.

Dependent variable: Δ MFN tariff									
	(1a)	(1b)	(1c)	(2a)[a]	(2b)[a]	(2c)[a]	(3a)[a]	(3b)[a]	(3c)[a]
	1993–2010	1993–2001	2002–2010	1993–2010	1993–2001	2002–2010	1992–2010	1992–2001	2002–2010
Δ Preferential tariff				0.248***	0.250***	-0.121***			
				[0.003]	[0.003]	[0.022]			
Import share x margin indicator	-0.301***	-0.393**	0.152***	-0.185**	-0.004**	0.261**			
	[0.041]	[0.072]	[0.042]	[0.087]	[0.128]	[0.123]			
Import share				-0.229	-0.172	-0.250			
				[0.080]	[0.111]	[0.117]			
Pref margin indicator				-0.886***	-1.014***	0.817***			
				[0.021]	[0.032]	[0.026]			
Pref. margin							-1.176***	-1.373***	0.825
							[0.021]	[0.032]	[0.026]
Constant	-6.125	-6.364	-0.303	-6.647	-6.537	-0.100	-6.660	-7.268	-1.003
	[0.162]	[0.232]	[0.147]	[0.160]	[0.216]	[0.147]	[0.160]	[0.228]	[0.147]
Fixed effects	Year,HS2, Year-HS2	Year,HS2, Year-HS2	Year,HS2, Year-HS2	Year,HS2, Year-HS2	Year,HS2, Year-HS2	Year,HS2, Year-HS2	Year,HS2, Year-HS2	Year,HS2, Year-HS2	Year,HS2, Year-HS2
Observations	87,840	43,920	43,920	87,840	43,920	43,920	87,840	43,920	43,920
R-squared	0.539	0.564	0.500	0.590	0.627	0.510	0.556	0.581	0.510

Notes: Robust standard errors in brackets. * significant at 10%; ** significant at 5%; *** significant at 1%.

[a]This regression uses IV-GMM.

Table 4

Effect of preferential tariff changes on MFN tariff changes, additional robustness test.

Dependent variable: Δ Arancel MFN												
	(1a)	(1b)	(1c)	(2a)	(2b)	(2c)	(3a)	(3b)	(3c)	(4a)	(4b)	(4c)
	1992–2010	1992–2001	2002–2010	1992–2010	1992–2001	2002–2010	1995–2010	1995–2001	2002–2010	1995–2010	1995–2001	2002–2010
Δ Preferential tariff	0.273***	0.260***	-0.312***	0.238***	0.231***	-0.315***	0.212***	0.250***	-3.031	0.460***	0.590***	-0.312***
	[0.003]	[0.004]	[0.072]	[0.015]	[0.003]	[0.044]	[0.021]	[0.004]	[7.163]	[0.019]	[0.032]	[0.044]
Binding indicator	-0.534***	-0.750***	-0.072***									
	[0.051]	[0.074]	[0.063]									
Lagged MFN tariff				-0.064***	-0.067***	-0.032***						
				[0.002]	[0.002]	[0.002]						
Lagged Pref. Tariff 1							0.110**	0.090***	-7.154			
							[0.004]	[0.003]	[15.915]			
Lagged Pref. Tariff 2							0.075***	0.076***	-1.415			
							[0.002]	[0.002]	[2.431]			
Δ N. exporters										-0.002*	-0.004**	-0.001*
										[0.002]	[0.003]	[0.002]
Δ Herfindahl exports										-5.17	-35.992	-7.95
										[3.020]	[64.943]	[3.198]
Constant	-4.612	-5.231	-0.176	0.044	-5.517	0.031	-0.659	-5.880	0.121	-0.107	-1.088	0.134
	[0.178]	[0.250]	[0.160]	[0.155]	[0.238]	[0.148]	[0.157]	[0.237]	[0.311]	[0.120]	[0.198]	[0.130]
Fixed effects	Year,HS2, Year-HS2	Year,HS2, Year-HS2	Year,HS2, Year-HS2	Year,HS2, Year-HS2	Year,HS2, Year-HS2	Year,HS2, Year-HS2	Year,HS2, Year-HS2	Year,HS2, Year-HS2	Year,HS2, Year-HS2	Year,HS2, Year-HS2	Year,HS2, Year-HS2	Year,HS2, Year-HS2
Observations	92,720	48,800	43,920	92,720	48,800	43,920	87,839	48,798	39,041	87,840	43,920	43,920
R-squared	0.617	0.644	0.498	0.590	0.651	0.500	0.594	0.653	0.292	0.395	0.206	0.416

Notes: Robust standard errors in brackets. * significant at 10%; ** significant at 5%; *** significant at 1%.

are examined to establish their role in MFN tariff variations. The MFN tariff lag is used to build the bound tariff index to avoid endogeneity problems. For columns (1a)-(1c) of Table 4, given that there is no information on bound tariffs for previous years (t=1993–2010), the coefficient for the bound tariff index is negative, implying that products with a higher bound tariff index have their MFN tariffs increased to a lesser extent.

In addition, an MFN tariff lag is added as an explanatory variable. This variable is instrumentalized using three-period lags in MFN tariffs to avoid endogeneity problems. The results are shown in columns (2a)-(2c) of Table 4. The coefficients for MFN lags are negative and significant in the three columns, indicating that MFN tariffs, which were initially higher, increase to a lesser extent.

For columns (3a)-(3b) we add the variation of preferential tariffs lagged two and three periods. As mentioned in Section 4, MFN tariffs may react with a lag to variations in preferential tariffs. The coefficients for lags in preferential tariffs are positive and significant in columns (3a)-(3b), supporting the identification of a building block in the initial period. For 2002–2010 the coefficients are not significant but maintain a negative sign.

Lastly, variations in the Herfindahl index for export values and the number of exporters are included. Given data availability, variations in these variables are constructed for 1992–1993. To avoid endogeneity problems, t=1995–2010 is used. Columns (4a)-(4c) show the results, where the variation in the number of exporters is negative and significant, indicating that a higher number of exporters promotes a reduction in MFN tariffs.

6.3 Results by Sector

Table 5 shows estimations for the effect of variations in preferential tariffs on changes in Peru's external tariffs, disaggregated by sector. The results for the mining sector were omitted because all mining products were completely liberalized over the study period. For almost every sector in periods 1992–2001 and 2002–2010, a building block effect is confirmed. However, the stumbling block effect for 2002–2010 was verified only in three sectors: electrical machinery, transportation, and miscellaneous; i.e., in these sectors, the products that had their preferential tariffs reduced the most had their external tariffs reduced to a lesser extent or increased in sub-period 2002–2010. For the remaining sectors, where the variation of preferential tariffs was not significant for 2002–2010, most coefficients were negative.

7. Conclusions and Policy Implications

This research studies the effect of the CAN trade agreement on Peru's multilateral trade liberalization using 6-digit HS data for t=1992–2010. The results indicate that the agreement had a building block effect, given that MFN tariffs decreased due to reductions in preferential tariffs imposed by Peru.

Table 5

Effect of preferential tariff changes on MFN tariff changes, by sector.

Dependent variable: Δ MFN Tariff												
	01-05 Live animals			06-15 Vegetable			16-24 Edible products			27 Fuels		
	(1a)	(1b)	(1c)	(2a)	(2b)	(2c)	(3a)	(3b)	(3c)	(4a)	(4b)	(4c)
	1992–2010	1992–2001	2002–2010	1992–2010	1992–2001	2002–2010	1992–2010	1992–2001	2002–2010	1992–2010	1992–2001	2002–2010
Δ Preferential	0.505***	0.610***	-0.05	0.367***	0.373***	-0.328	0.157***	0.142***	-0.442	-0.033	-0.030	-2.709
Tariff	[0.031]	[0.045]	[0.642]	[0.020]	[0.023]	[1.111]	[0.012]	[0.014]	[0.365]	[0.085]	[0.60]	[11.247]
Constant	-1.112	-4.988	0.095	0.243	-2.064	0.274	0.075	-3.515	0.684	0.000	-2.698	0.000
	[0.221]	[0.329]	[0.168]	[0.132]	[0.160]	[0.125]	[0.253]	[0.355]	[0.230]	[0.262]	[0.185]	[0.405]
Fixed effects	Year,	Year,	Year,	Year,	Year,	Year,	Year,	Year,	Year,	Year,	Year,	Year,
	HS-2	HS-2	HS-2	HS-2	HS-2	HS-2	HS-2	HS-2	HS-2	HS-2	HS-2	HS-2
Observations	3648	1920	1728	5776	3040	2736	3363	1770	1593	760	400	360
R-squared	0.6008	0.5595	0.7025	0.5033	0.5033	0.3564	0.6638	0.6908	0.5533	0.4453	0.4864	0.352

Dependent variable: Δ MFN Tariff												
	28-38 Chemicals			39-40 Plastic or Rubber			41-43 Hides and Skins			44-49 Wood		
	(5a)	(5b)	(5c)	(6a)	(6b)	(6c)	(7a)	(7b)	(7c)	(8a)	(8b)	(8c)
	1992–2010	1992–2001	2002–2010	1992–2010	1992–2001	2002–2010	1992–2010	1992–2001	2002–2010	1992–2010	1992–2001	2002–2010
Δ Preferential	0.288***	0.280***	0.026	0.249***	0.245***	0.169	0.113***	0.063	-0.116	0.205***	0.177***	-0.202
Tariff	[0.006]	[0.008]	[0.124]	[0.010]	[0.013]	[0.193]	[0.032]	[0.044]	[0.644]	[0.013]	[0.017]	[0.157]
Constant	-0.176	-5.406	-0.112	0.106	-2.977	-0.167	-0.692	-1.371	0.130	0.604	0.451	-0.303
	[0.066]	[0.100]	[0.035]	[0.144]	[0.184]	[0.098]	[0.324]	[0.439]	[0.144]	[0.190]	[0.278]	[0.110]
Fixed effects	Year,	Year,	Year,	Year,	Year,	Year,	Year,	Year,	Year,	Year,	Year,	Year,
	HS-2	HS-2	HS-2	HS-2	HS-2	HS-2	HS-2	HS-2	HS-2	HS-2	HS-2	HS-2
Observations	14,079	7,410	6,669	3,591	1,890	1,701	1,140	600	540	4,123	2,170	1,953
R-squared	0.579	0.532	0.761	0.508	0.474	0.565	0.647	0.656	0.5	0.648	0.642	0.537

Dependent variable: Δ MFN Tariff												
	50-63 Textiles and Clothing			64-67 Footwear			68-71 Stone and Glass			72-83 Metals		
	(9a)	(9b)	(9c)	(10a)	(10b)	(10c)	(11a)	(11b)	(11c)	(12a)	(12b)	(12c)
	1992–2010	1992–2001	2002–2010	1992–2010	1992–2001	2002–2010	1992–2010	1992–2001	2002–2010	1992–2010	1992–2001	2002–2010
Δ Preferential	0.161***	0.153***	-0.020	0.074***	0.079**	-0.001	0.241***	0.252***	0.653**	0.337***	0.327***	-0.065
Tariff	[0.004]	[0.005]	[0.016]	[0.024]	[0.032]	[0.038]	[0.013]	[0.016]	[0.308]	[0.010]	[0.012]	[0.870]
Constant	-0.122	-0.406	0.043	-0.265	-0.354	-0.036	-0.274	-2.077	0.309	-0.434	-2.947	-0.037
	[0.059]	[0.092]	[0.025]	[0.167]	[0.250]	[0.054]	[0.170]	[0.220]	[0.111]	[0.012]	[0.158]	[0.114]
Fixed effects	Year,	Year,	Year,	Year,	Year,	Year,	Year,	Year,	Year,	Year,	Year,	Year,
	HS-2	HS-2	HS-2	HS-2	HS-2	HS-2	HS-2	HS-2	HS-2	HS-2	HS-2	HS-2
Observations	15,295	8,050	7,245	1,045	550	495	3,515	1,850	1,665	10,317	5,430	4,887
R-squared	0.869	0.861	0.795	0.930	0.924	0.879	0.611	0.616	0.514	0.454	0.429	0.511

Dependent variable: Δ MFN Tariff									
	84-85 Machinery / Electrical			86-89 Transportation			90-99 Miscellaneous		
	(13a)	(13b)	(13c)	(14a)	(14b)	(14c)	(15a)	(15b)	(15c)
	1992–2010	1992–2001	2002–2010	1992–2010	1992–2001	2002–2010	1992–2010	1992–2001	2002–2010
Δ Preferential Tariff	0.310***	0.295***	-1.442***	0.597***	0.580***	-2.210***	0.343***	0.286***	-0.909***
	[0.008]	[0.009]	[0.198]	[0.024]	[0.026]	[0.746]	[0.011]	[0.014]	[0.198]
Constant	-0.122	-0.781	0.270	-0.355	-0.348	0.085	-0.252	-0.857	0.347
	[0.069]	[0.081]	[0.058]	0.18	[0.213]	[0.265]	[0.179]	[0.274]	[0.149]
Fixed effects	Year,	Year,	Year,	Year,	Year,	Year,	Year,	Year,	Year,
	HS-2	HS-2	HS-2	HS-2	HS-2	HS-2	HS-2	HS-2	HS-2
Observations	14,345	7,550	6,795	2,508	1,320	1,188	7,201	3,790	3,411
R-squared	0.580	0.585	0.605	0.582	0.631	0.076	0.724	0.755	0.536

The sample is divided into two sub-periods: 1992–2001 and 2002–2010. For sub-period 1992–2001 we identify a building block effect. We also find that products with a higher volume of preferential imports had their external tariffs reduced when their preferential margins were sizeable. In addition, when the explanatory variable is changed from preferential tariffs to the instrumentalized preferential margin, it shows a negative relationship with MFN tariffs; i.e., an increase in preferential margins reduced external tariffs.

This building block effect may be due to the complementarity effect suggested by Bagwell and Staiger (1999), whereby trade agreements have a complementarity effect with multilateral liberalization of members; i.e., when the latter reduce their preferential tariffs, their MFN tariffs also decrease.

For the second half, we find a stumbling block effect, indicating that, given a reduction of preferential tariffs, MFN tariffs increased or decreased to a lesser extent. Similarly, preferential imports with a sizeable preferential margin had their external tariffs increased. When preferential tariffs are replaced by preferential margins, the result also supports the stumbling block effect. Since our estimations are not structural, nor are we testing any direct model, we can use theorical literature to have a better understanding of why there is a change to a stumbling block effect in the second half of the sample. Figure 2 shows that, for the second period, MFN tariffs on products with high preferential liberalization increased more or decreased less. This contradicts the model by Panagariya and Findlay (1994), which suggests that, due to decreased lobbying, sectors that compete with non-members become more attractive. An examination of preferential imports by sector shows that, in some cases, MFN tariffs increase. This may be due to loss aversion, as proposed by Tovar (2014). Finally, the punishment effect suggested by Bagwell and Staiger (1999) may contribute to understanding why Peru's MFN tariffs increased or decreased less during the second period.

It is also important to review Peru's trade policy during those years. Supreme Decree 073-2001-EF (2001) mandated a reduction of external tariffs on specific products. Additionally, in 2001 the tariff reduction schedule towards CAN members began for four of the eight annexes mentioned in Section 2. These four annexes contained the most protected products with the highest preferential tariffs; and an aggressive tariff reduction schedule began to fully liberalize them by 2005, as indicated by Peru's reincorporation agreement. This sheds light on why MFN tariffs decreased less than preferential tariffs, resulting in a stumbling block effect.

Lastly, we performed the same analysis by sector for the complete sample and for the first period, where the previous results held for most sectors. In the second period, preferential tariffs showed a significant stumbling block effect only in four sectors. For the rest, the relationship was mostly negative, although not significant.

The results are somewhat similar to those in the study by Estevadeordal et al. (2008); i.e., that FTZs during the 1990s were prone to multilateral trade liberalization in Latin American countries, reflected in a complementarily effect between preferential and MFN tariffs.

These findings indicate that, in general, the CAN trade agreement had positive effects on Peru's trade liberalization with the rest of the world. It is important to consider that, due to the GPA, MFN tariffs are increasingly closer to zero, and this could create difficulties when new

GPAs are negotiated.

As a result of preferential margins being considerably small, as shown in this and other studies, there will be no incentive for future partners to negotiate with Peru and comply with rules of origin. At the same time, if MFN tariffs were to be increased to create a larger preferential margin, non-member countries could retaliate by increasing their MFN tariffs. Further research could focus on non-tariff barriers negotiated under the CAN framework and imposed by Peru on non-members. This could be useful in assessing Peru's trade policies, as non-tariff barriers may also have a multilateral liberalization effect. Moreover, considering Peru's low average MFN tariffs, non-tariff barriers may become significant negotiation points in future trade agreements.

Appendix A - First-Stage Estimates

Table A.1

First-stage estimates.

Dependent variable: Δ Applied Preferential Tariff						
	(1a)	(1b)	(1c)	(2a)	(2b)	(2c)
	1993–2010	1993–2001	2002–2010	1992–2010	1992–2001	2002–2010
Δ Orginal Preferential Tariff	0.794***	0.787**	2.470***			
	[0.002]	[0.004]	[0.020]			
Lag Applied Preferential Tariff 1				0.249***	0.325***	0.227***
				[0.002]	[0.001]	[0.002]
Lag Applied Preferential Tariff 2				0.006***	0.071***	0.086***
				[0.002]	[0.001]	[0.001]
Constant	0.073	0.162	-0.247	-5.707	-4.937	0.03
	[0.187]	[0.304]	[0.147]	[0.245]	[0.419]	[0.019]
Fixed Effects	Year, HS2,	Year, HS2,	Year, HS2,	Year, HS2,	Year, HS2,	Year, HS2,
	Year-HS2	Year-HS2	Year-HS2	Year-HS2	Year-HS2	Year-HS2
Observations	92,720	48,800	43,920	92,720	48,800	43,920
Shea partial R-squared	0.5077	0.4943	0.2529	0.1606	0.3883	0.5035
F-test of excluded instruments stat	95,334	47,534	14,813	6,314	4,930	1,536
F-test of excluded inst. stat p-value	0	0	0	0	0	0
Haussmann test p-value	0	0	0	0	0	0
Hansen J stadistic p-value	-	-	-	0.1	0.09	0.23

Notes: Robust standard errors in brackets. * significant at 10%; ** significant at 5%; *** significant at 1%.

References

Bagwell, K., and Staiger, R. W. (1999). Regionalism and Multilateral Tariff Co-operation. In J. Piggott and A. Woodland (Eds.), *International Trade Policy and the Pacific Rim* (pp. 157-190). London: Palgrave Macmillan.

Bohara, A. K., Gawande, K., and Sanguinetti, P. (2004). Trade diversion and declining tariffs: evidence from Mercosur. *Journal of International economics 64(1)*, 65-88.

Bond, E. W., Riezman, R. G., and Syropoulos, C. (2013). A strategic and welfare theoretic analysis of free trade areas. In R. Riezman (Ed.), *International Trade Agreements and Political Economy* (pp. 101-127). World Scientific.

Cadot, O., de Melo, J., and Olarreaga, M. (1999). Regional Integration and Lobbying for Tariffs against Nonmembers. *International Economic Review 40(3)*, 635-658.

Calvo-Pardo, H., Freund, C., and Ornelas, E. (2011) The ASEAN Free Trade Agreement: Impact on Trade Flows and External Trade Barriers. In R. Barro and J.-H. Lee (Eds.), *Costs and Benefits of Economic Integration in Asia*. Oxford University Press.

Commission of the Cartagena Agreement. (1991). Decisión 301: Instrumentación de la profundización de la integración andina en el sector comercio. Gaceta Oficial del Acuerdo de Cargaena No. 85. Lima.

Commission of the Cartagena Agreement. (1992). Decisión 321: Suspensión temporal del Perú. Lima.

Commission of the Cartagena Agreement. (1997). Decisión 414: Perfeccionamiento de la Integración Andina. Lima.

Estevadeordal, A., Freund, C., and Ornelas, E. (2008). Does Regionalism Affect Trade Liberalization toward Nonmembers? The Quarterly Journal of Economics 123(4), 1531-1575.

Freund, C. (2000). Multilateralism and the endogenous formation of preferential trade agreements. *Journal of International Economics 52(2)*, 359-376.

Karacaovali, B., and Limão, N. (2005). The Clash of Liberalizations: Preferential versus Multilateral Trade Liberalization in the European Union. Policy Research Working Paper No. 3493. The World Bank.

Ketterer, T. D., Bernhofen, D. M., and Milner, C. (2014). Preferences, rent destruction and multilateral liberalization: The building block effect of CUSFTA. *Journal of International Economics 92(1)*, 63-77.

Ketterer, T. D., Bernhofen, D. M., and Milner, C. (2015). The impact of trade preferences on multilateral tariff cuts: Evidence for Japan. *Journal of the Japanese and International Economies 38*, 31-51.

Krishna, P. (1998). Regionalism and Multilateralism: A Political Economy Approach. *The Quarterly Journal of Economics 113(1)*, 227-251.

Limão, N. (2006). Preferential Trade Agreements as Stumbling Blocks for Multilateral Trade Liberalization: Evidence for the United States. *American Economic Review 96(3)*, 896-914.

Limão, N. (2007). Are Preferential Trade Agreements with Non-trade Objectives a Stumbling

Block for Multilateral Liberalization? *The Review of Economic Studies 74(3)*, 821-855.

Ludema, R. D., and Mayda, A. M. (2009). Do countries free ride on MFN? *Journal of international Economics 77(2)*, 137-150.

Ornelas, E. (2005). Rent Destruction and the Political Viability of Free Trade Agreements. *The Quarterly Journal of Economics 120(4)*, 1475-1506.

Panagariya, A., and Findlay, R. (1994). A Political-Economy Analysis of Free Trade Areas and Customs Unions. Policy Research Working Paper No. 1261. The World Bank.

Richardson, M. (1993). Endogenous protection and trade diversion. *Journal of International Economics 34(3-4)*, 309-324.

Supreme Decree 073-2001-EF. Modifican tasas por concepto de derechos arancelarios ad valorem CIF a la importación de insumos, partes y piezas. https://cdn.www.gob.pe/uploads/document/file/250554/225943_file20181218-16260-fakelh.pdf.

Tovar, P. (2012). Preferential trade agreements and unilateral liberalization: evidence from CAFTA. *World Trade Review 11(4)*, 591-619.

Tovar, P. (2014). External tariffs under a free-trade area. *The Journal of International Trade & Economic Development 23(5)*, 656-681.